

I-95 & US 202 Interchange Improvements

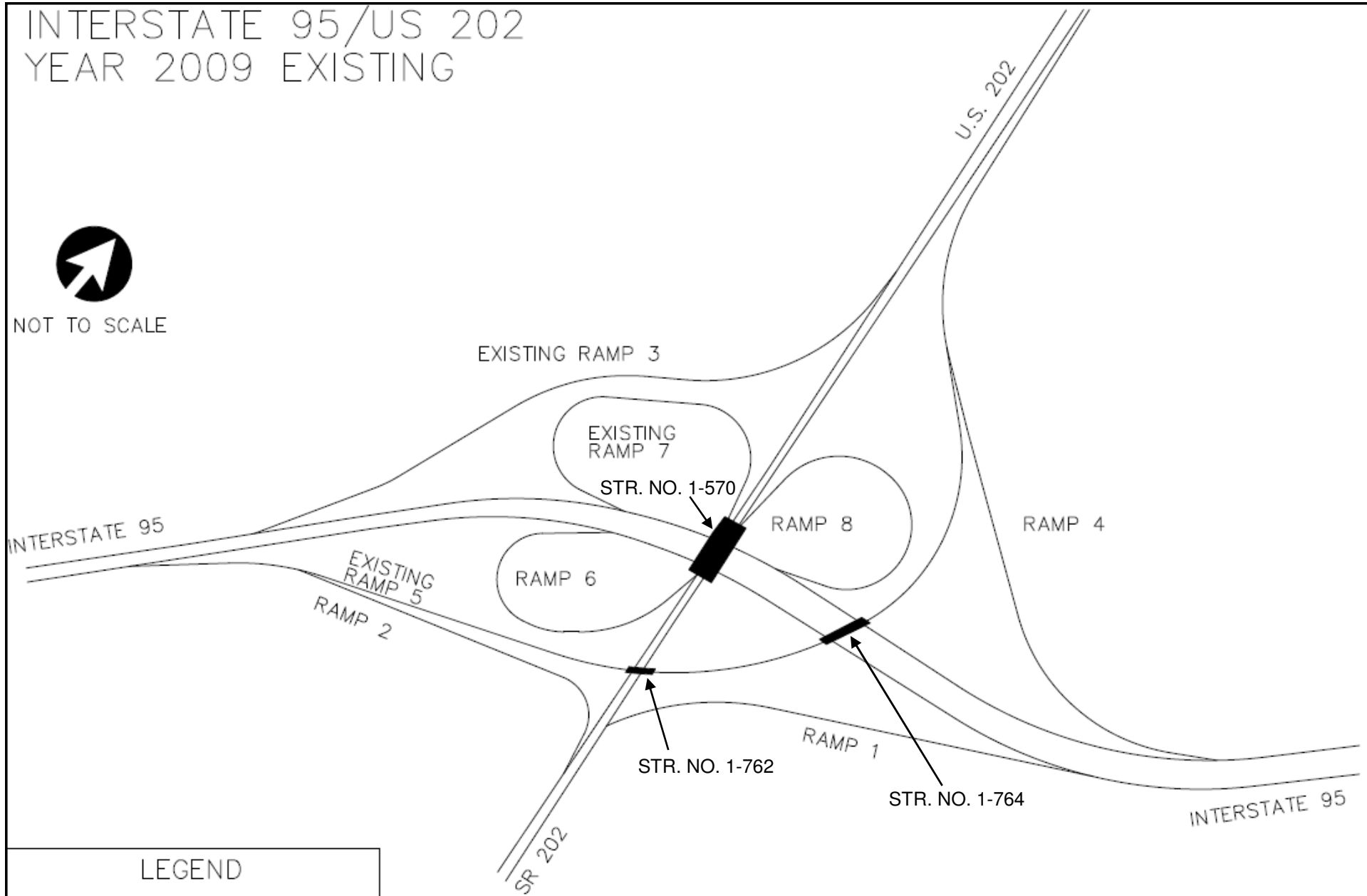
Presentation to:
North New Castle County Transportation Management Team
By: McCormick Taylor, Inc.
May 16, 2011

- **Estimated Construction Schedule: Sept. 2011 to August 2014**
- **Interchange Improvements:**
 - **Add lanes to I-95 ramps heading to and from US 202**
 - **Realign and reconstruct certain interchange ramps to address capacity and safety issues**
 - **Lower SB I-95 at US 202 to address existing clearance issue**
 - **Reconstruct US 202 bridge deck**
 - **Install new sign structures**
 - **Reconstruct pavement on I-95**

INTERSTATE 95/US 202 YEAR 2009 EXISTING



NOT TO SCALE



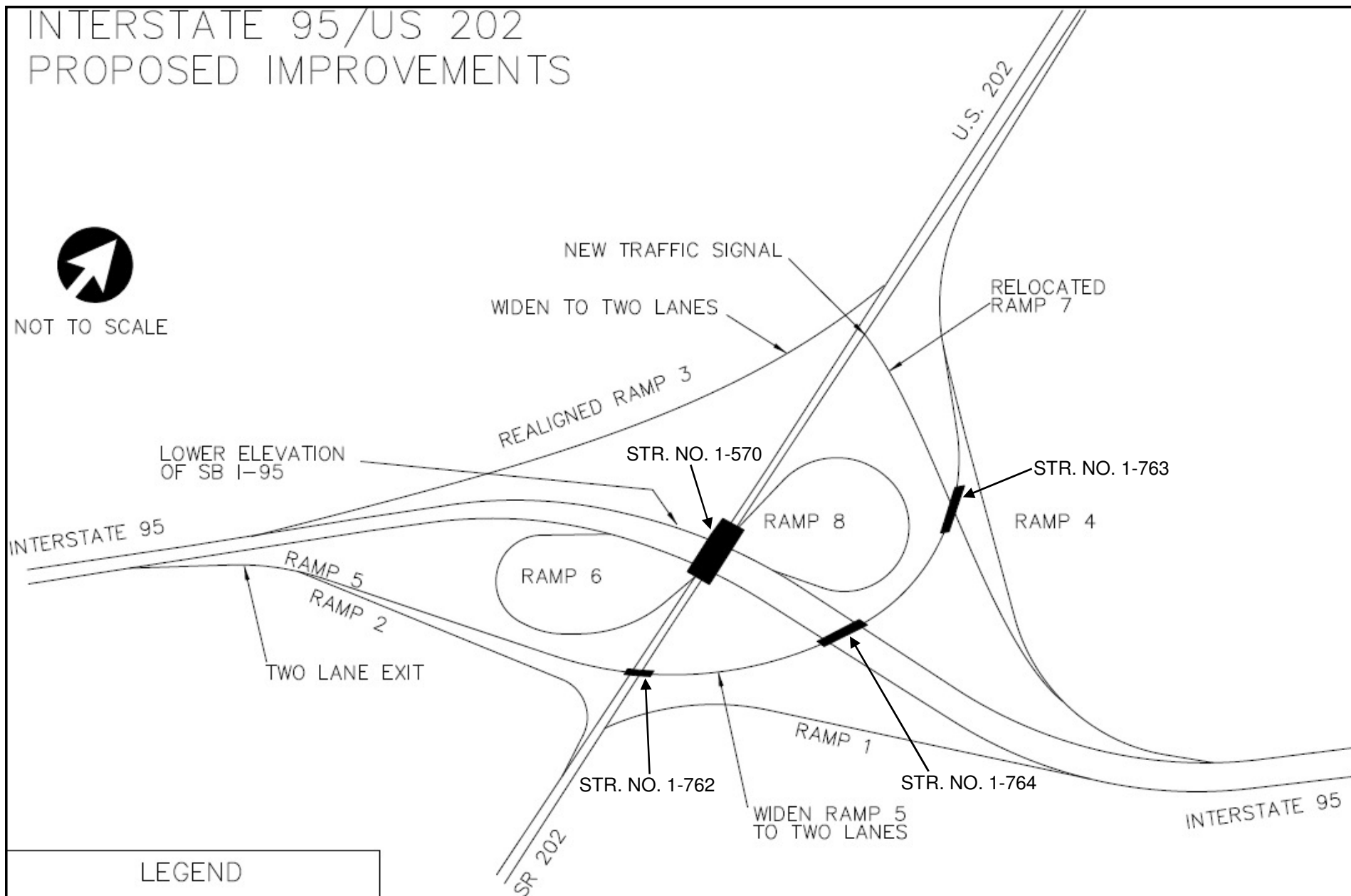
LEGEND

- CENTERLINE
- BRIDGE STRUCTURE

INTERSTATE 95/US 202 PROPOSED IMPROVEMENTS



NOT TO SCALE



LEGEND

- CENTERLINE
- BRIDGE STRUCTURE

I-95 & US 202 Interchange Improvements

- **Work Zone Traffic Impacts During Construction:**
 - Various lane shifts, reduced lane widths, and shoulder closures
 - Some off-peak lane closures (overnight and middle of day), but most of the time, all lanes will remain open
 - Closures of I-95, US 202, and some ramps required at times:
 - Estimated total of 6 weekends and 12 weeknights during entire three-year construction period, for bridge beam placements and removals
 - Ramp 8 from NB US 202 to SB I-95 will be closed for approx. 1 month
 - Occasional 15-minute stoppages of I-95 (during overnight hours)
 - I-495 will be recommended alternative route for I-95 through traffic
 - Detours will be posted for local traffic
 - Emergency Vehicle Access
- **Construction to be completed in three phases, each with multiple stages**

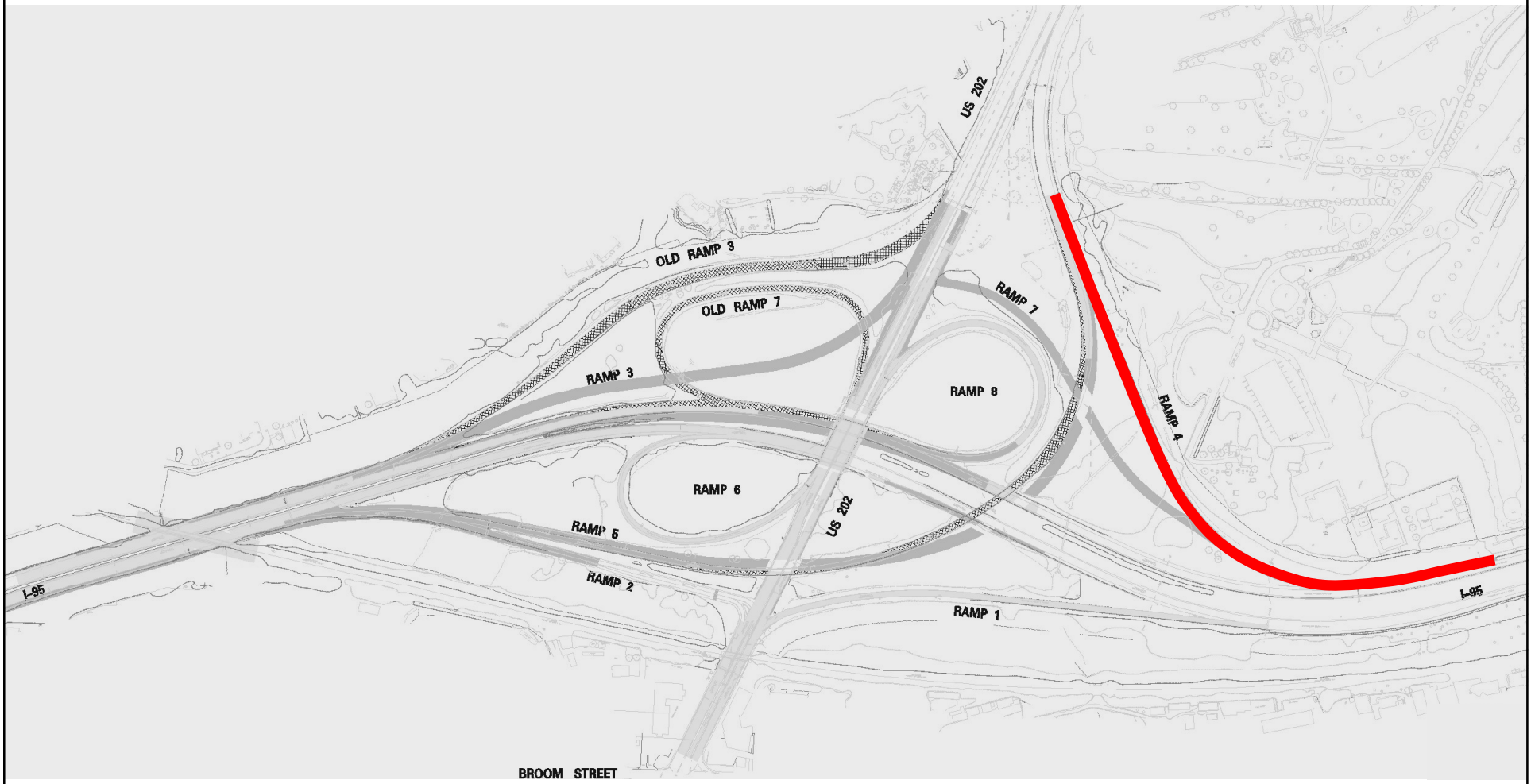
I-95 & US 202 Interchange Improvements

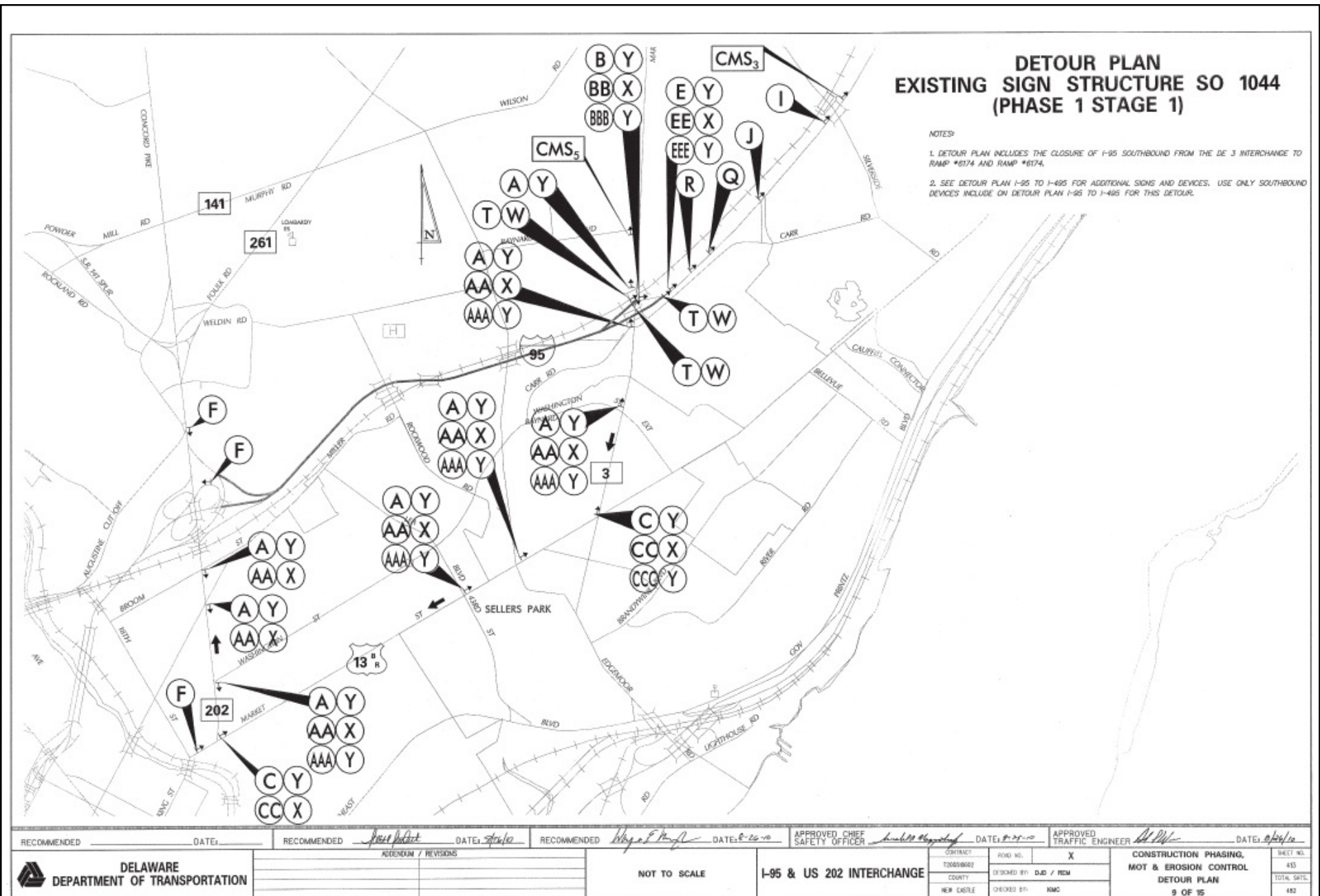
- **Phase 1:**
 - Construct new Ramp 5 and remove existing Ramp 5
 - Widen Ramp 2
 - Widen NB I-95 approaching Ramps 2 and 5
 - Lengthen Ramp 6 accel lane onto NB I-95
 - Construct new Ramp 7 and remove existing Ramp 7
 - Reconstruct Ramp 4
- **Phase 2:**
 - Construct new Ramp 3 and remove existing Ramp 3
 - Reconstruct and lower SB I-95 (Ramp 8 closed for one month)
- **Phase 3:**
 - Reconstruct US 202 bridge deck
 - Mill and overlay pavement, place final pavement markings

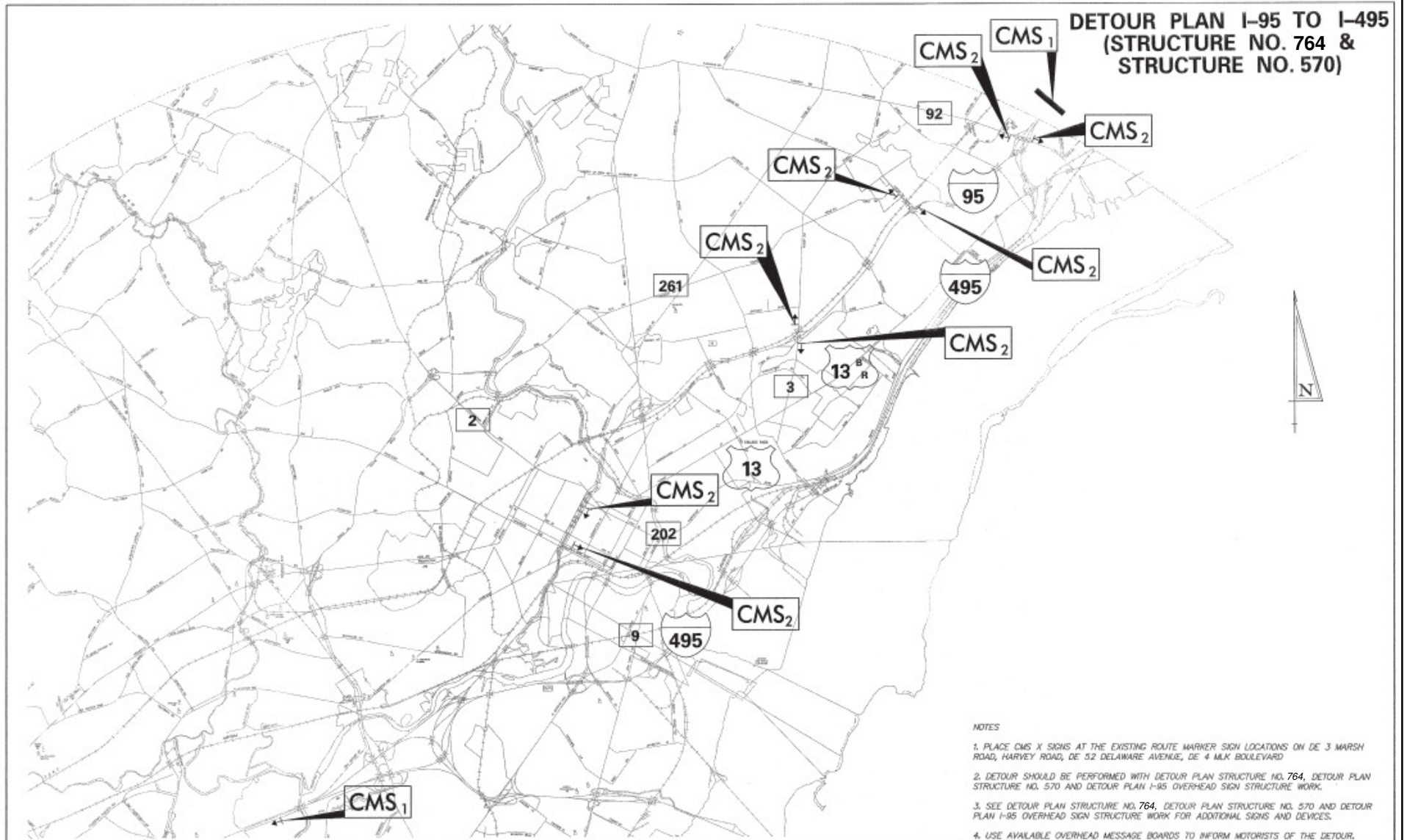
Traffic Impacts

- Close & detour SB I-95 and Ramp 4 (weeknight overnight hours)

Phase 1, Stage 1 Work Areas





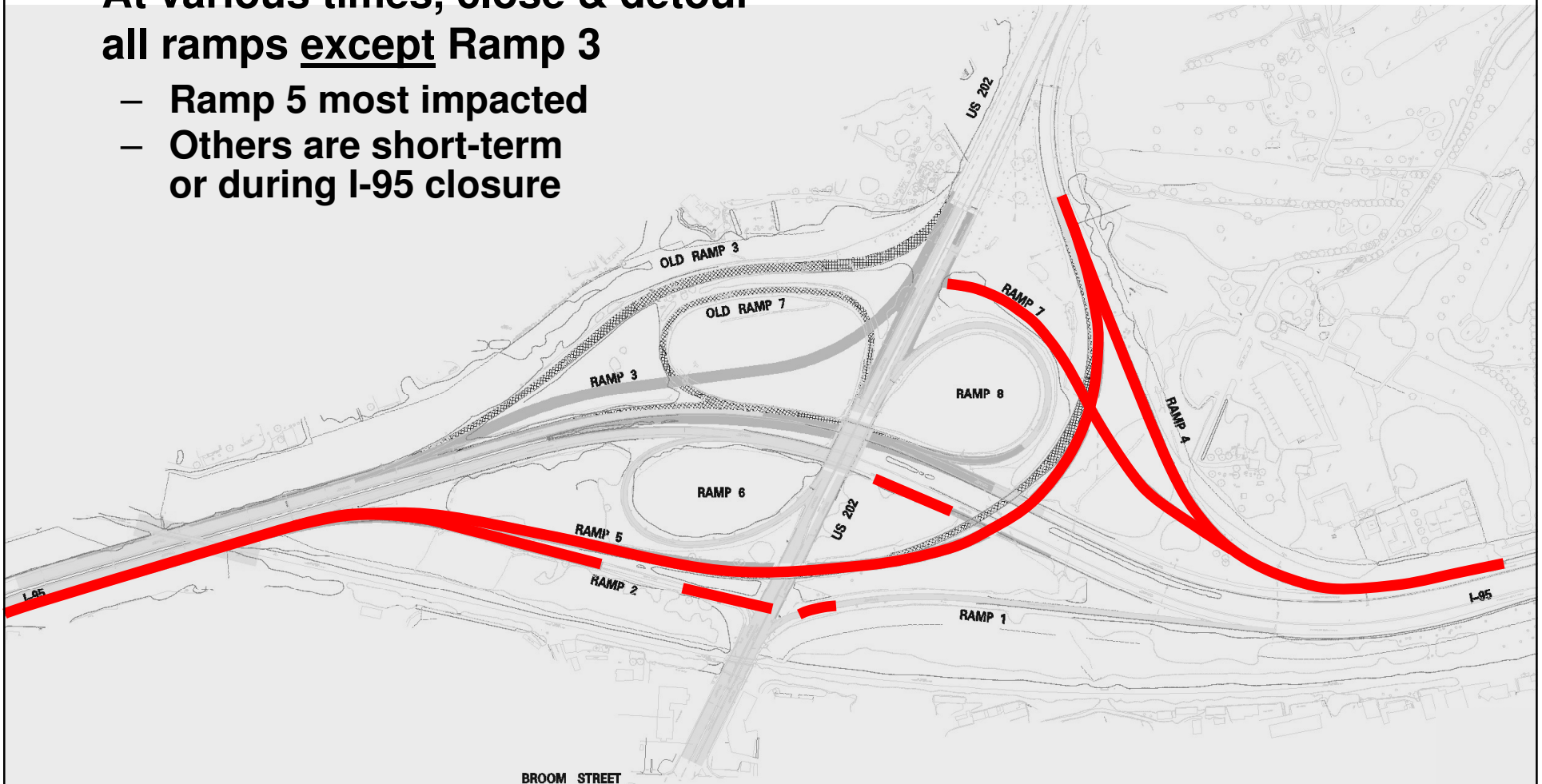


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|---|---|---|---|--|
| RECOMMENDED _____ DATE: _____ | RECOMMENDED <i>[Signature]</i> DATE: <i>8/16/10</i> | RECOMMENDED <i>[Signature]</i> DATE: <i>8-26-10</i> | APPROVED CHIEF SAFETY OFFICER <i>[Signature]</i> DATE: <i>8-26-10</i> | APPROVED TRAFFIC ENGINEER <i>[Signature]</i> DATE: <i>8/26/10</i> |
| DELAWARE DEPARTMENT OF TRANSPORTATION | | NOT TO SCALE | | I-95 & US 202 INTERCHANGE |
| ADDENDUM / REVISIONS _____ _____ _____ | | CONTRACT ROAD NO. X TOWNSHIP DESIGNED BY: DJD / PEM COUNTY CHECKED BY: KMC | | CONSTRUCTION PHASING, MOT & EROSION CONTROL DETOUR PLAN 12 OF 15 |
| | | | | SHEET NO. 416 TOTAL SHEETS 482 |

Phase 1, Stage 2 Work Areas

Traffic Impacts

- Close & detour I-95 (two weekends)
- Close & detour US 202 (two weekends)
- At various times, close & detour all ramps except Ramp 3
 - Ramp 5 most impacted
 - Others are short-term or during I-95 closure



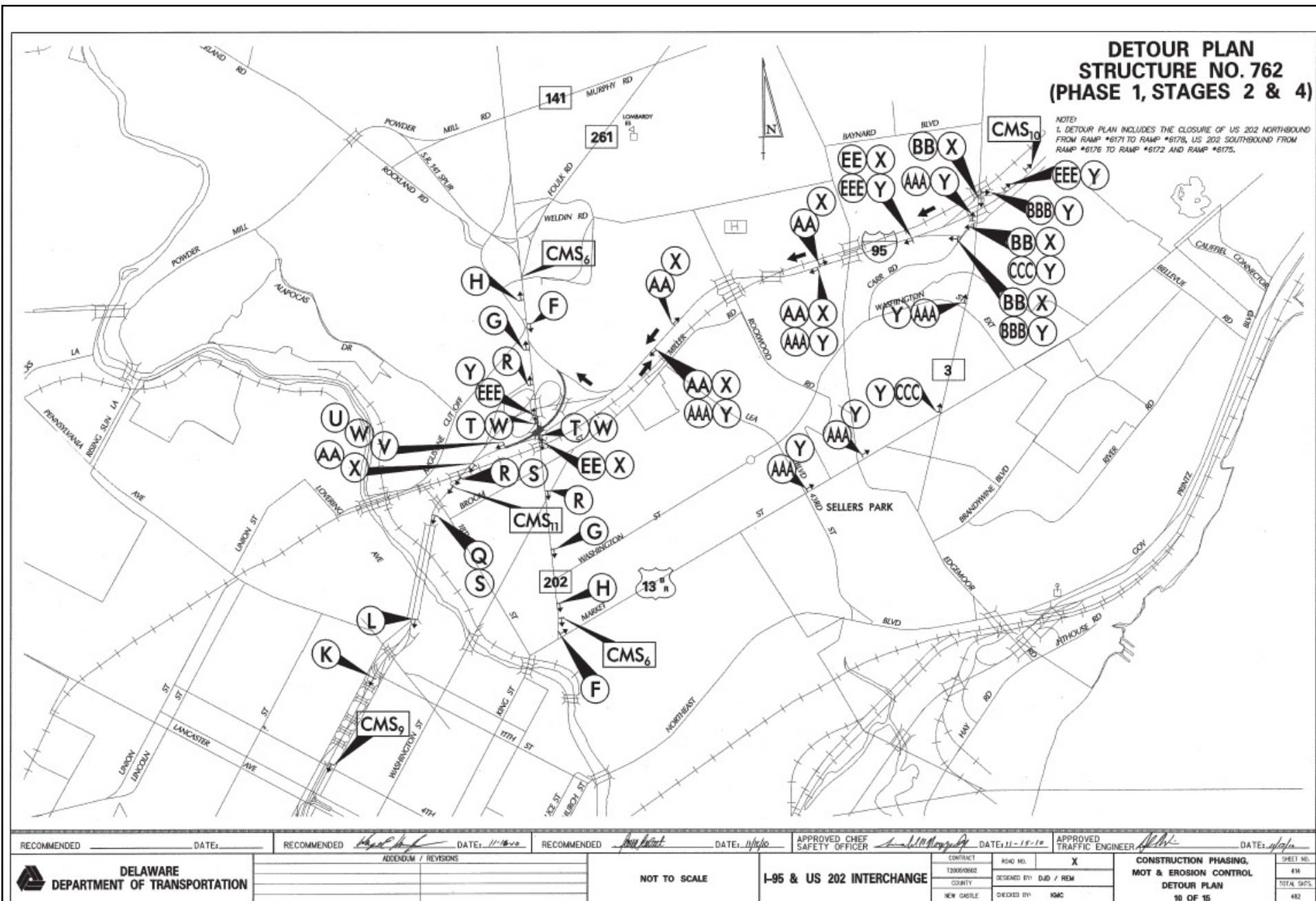
Stage Duration: 336 days

DETOUR PLAN RAMP #6174



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|---|---|---|---|---|--|--|--|--|--|---|
| RECOMMENDED _____ DATE: _____ | RECOMMENDED <i>[Signature]</i> DATE: <i>8/26/10</i> | RECOMMENDED <i>[Signature]</i> DATE: <i>8-26-10</i> | APPROVED CHIEF SAFETY OFFICER <i>[Signature]</i> DATE: <i>8-26-10</i> | APPROVED TRAFFIC ENGINEER <i>[Signature]</i> DATE: <i>8/26/10</i> | | | | | | |
| DELAWARE DEPARTMENT OF TRANSPORTATION | | NOT TO SCALE | | I-95 & US 202 INTERCHANGE | | | | | | |
| ADDENDUM / REVISIONS <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table> | | | | | | | | CONTRACT NO. _____ ROAD NO. X DESIGNED BY: DJB / REM COUNTY _____ CHECKED BY: KMC | | CONSTRUCTION PHASING, MOT & EROSION CONTROL DETOUR PLAN 5 OF 15 |
| | | | | | | | | | | |
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| SHEET NO. 400 | | TOTAL SHEETS 402 | | | | | | | | |

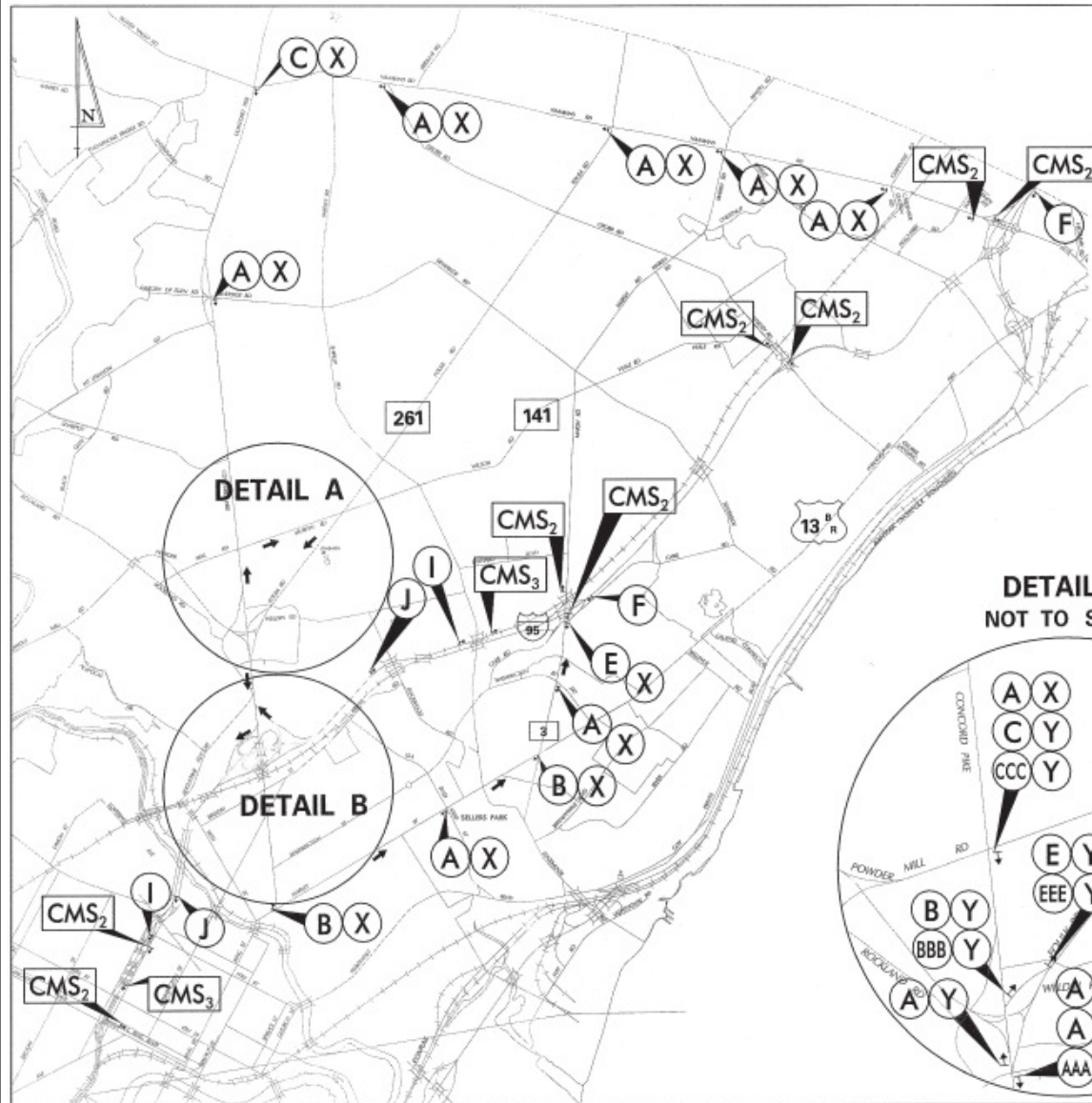
Ramp 4 Detour



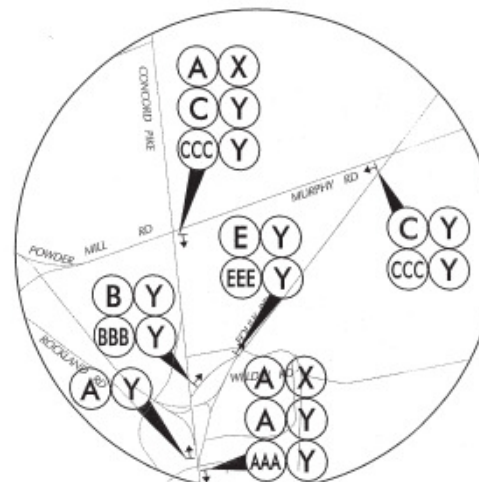
DETOUR PLAN STRUCTURE NO. 764 (PHASE 1, STAGE 2)

NOTES:

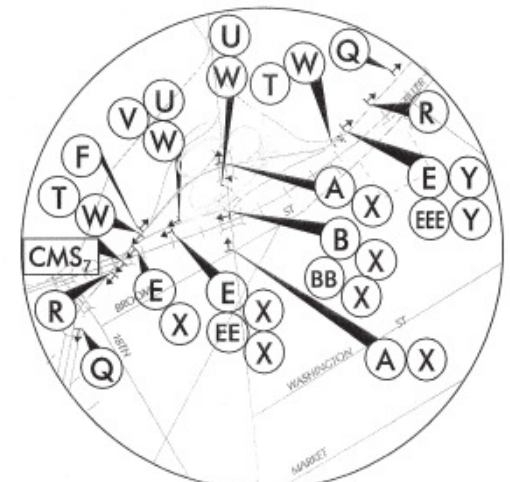
1. DETOUR PLAN INCLUDES THE CLOSURE OF I-95 NORTHBOUND FROM RAMP #6172 TO RAMP #6174, I-95 SOUTHBOUND FROM RAMP #6174 TO RAMP #6173, RAMP #6175, RAMP #6176 AND RAMP #6177.
2. DETOUR SHOULD BE PERFORMED WITH DETOUR PLAN I-95 TO I-495.
3. SEE DETOUR PLAN I-95 TO I-495 FOR ADDITIONAL SIGNS AND DEVICES.



**DETAIL A
NOT TO SCALE**

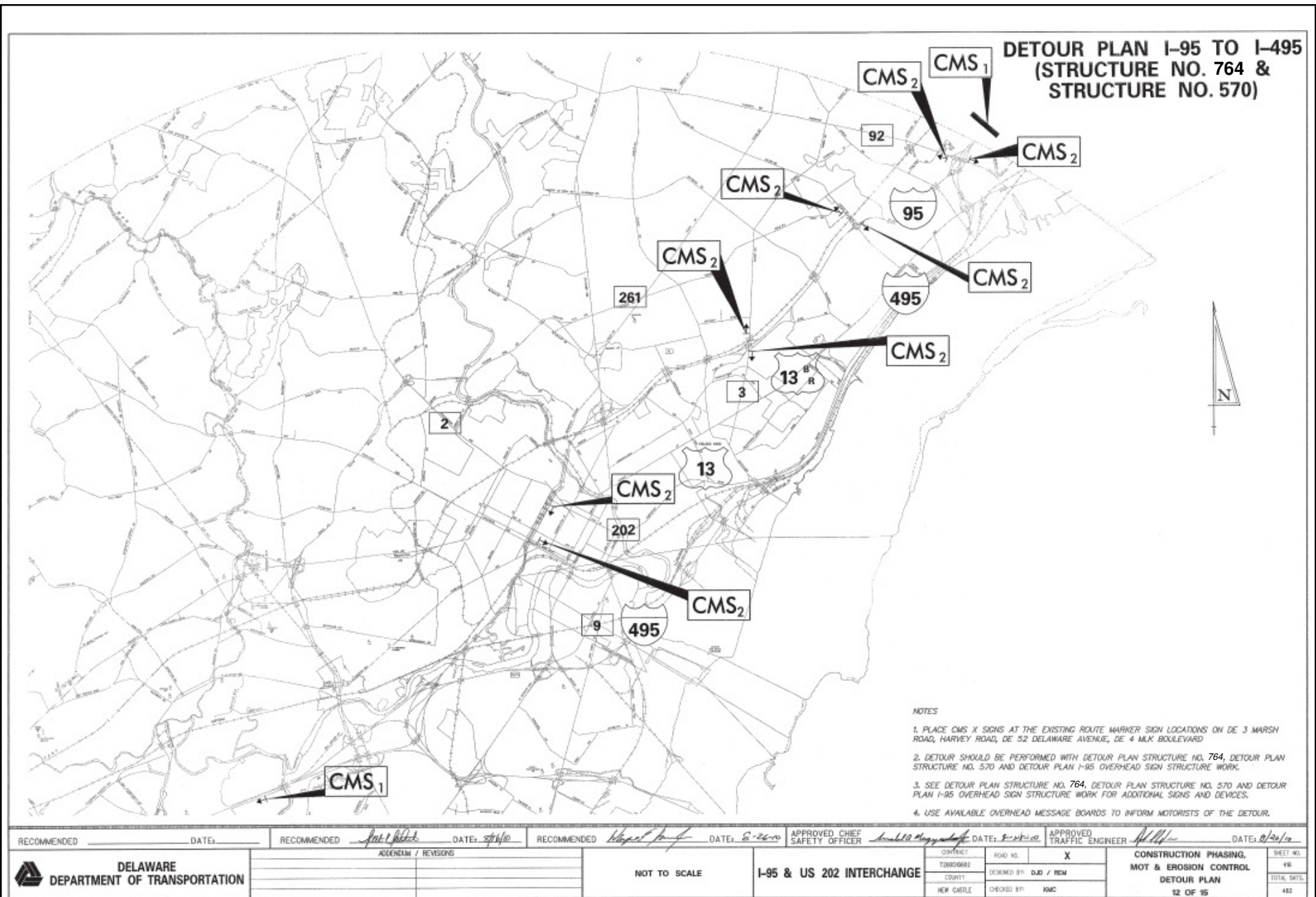


**DETAIL B
NOT TO SCALE**



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|---|--|--|---|--|
| RECOMMENDED _____ DATE: _____ | RECOMMENDED <i>Paul Platt</i> DATE: <i>8/28/10</i> | RECOMMENDED <i>Steve C. Platt</i> DATE: <i>8/28/10</i> | APPROVED CHIEF SAFETY OFFICER <i>Paul Platt</i> DATE: <i>8/28/10</i> | APPROVED TRAFFIC ENGINEER <i>Paul Platt</i> DATE: <i>8/28/10</i> |
| DELAWARE DEPARTMENT OF TRANSPORTATION ADDENDUM / REVISIONS _____ _____ _____ | | | NOT TO SCALE I-95 & US 202 INTERCHANGE | |
| CONTRACT 120000002 COUNTY NEW CASTLE CHECKED 03/25 HMC | | | ROAD NO. 95 DESIGNED BY DND / REM CHECKED 03/25 HMC CONSTRUCTION PHASING, MOT & EROSION CONTROL DETOUR PLAN 11 OF 15 | |
| SHEET NO. 415 | | | TOTAL SHEETS 482 | |

Ramp 5 over I-95

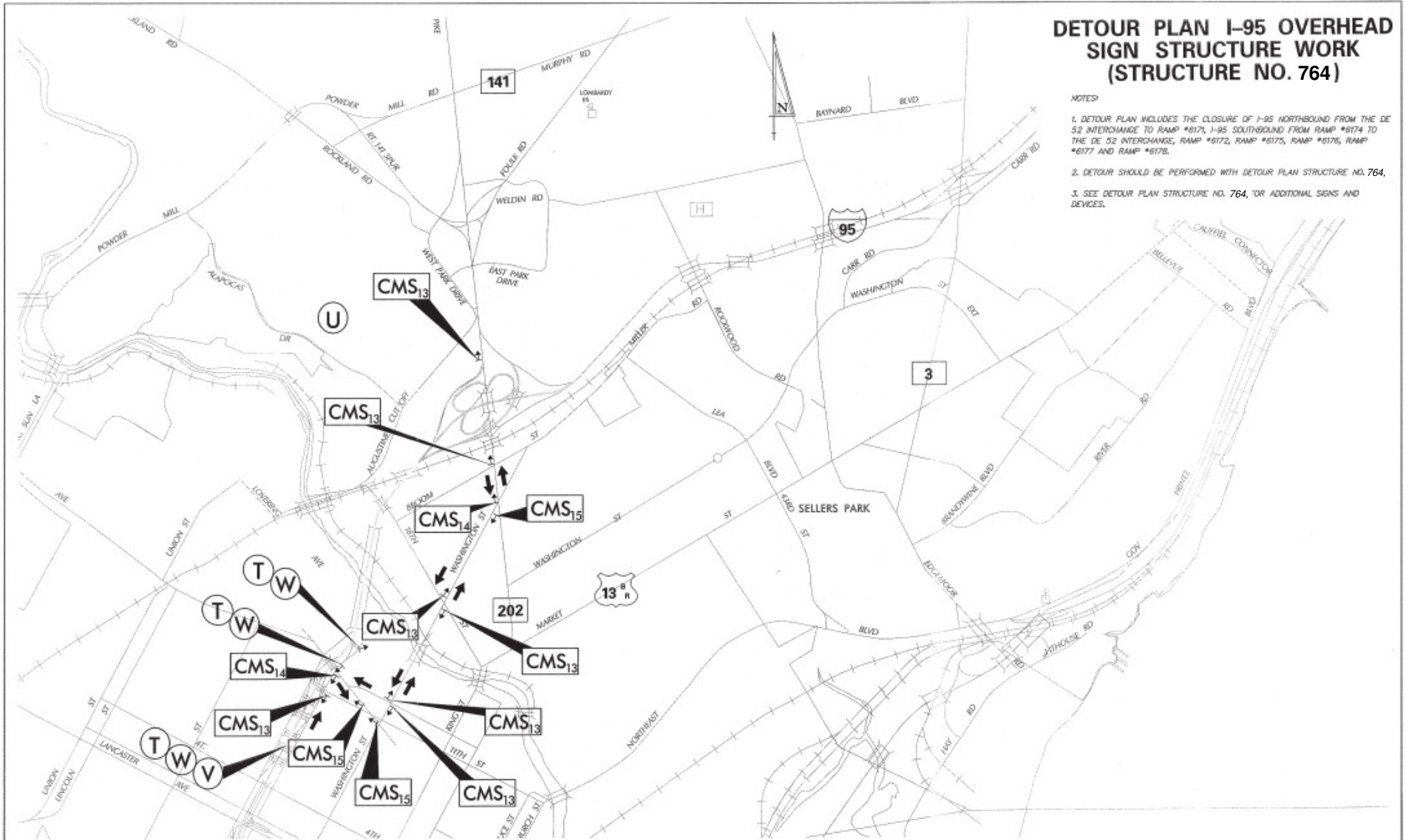


Detour to I-495

DETOUR PLAN I-95 OVERHEAD SIGN STRUCTURE WORK (STRUCTURE NO. 764)

NOTES

1. DETOUR PLAN INCLUDES THE CLOSURE OF I-95 NORTHBOUND FROM THE DE 52 INTERCHANGE TO RAMP #6171, I-95 SOUTHBOUND FROM RAMP #6174 TO THE DE 52 INTERCHANGE, RAMP #6172, RAMP #6175, RAMP #6176, RAMP #6177 AND RAMP #6178.
2. DETOUR SHOULD BE PERFORMED WITH DETOUR PLAN STRUCTURE NO. 764.
3. SEE DETOUR PLAN STRUCTURE NO. 764, FOR ADDITIONAL SIGNS AND DEVICES.

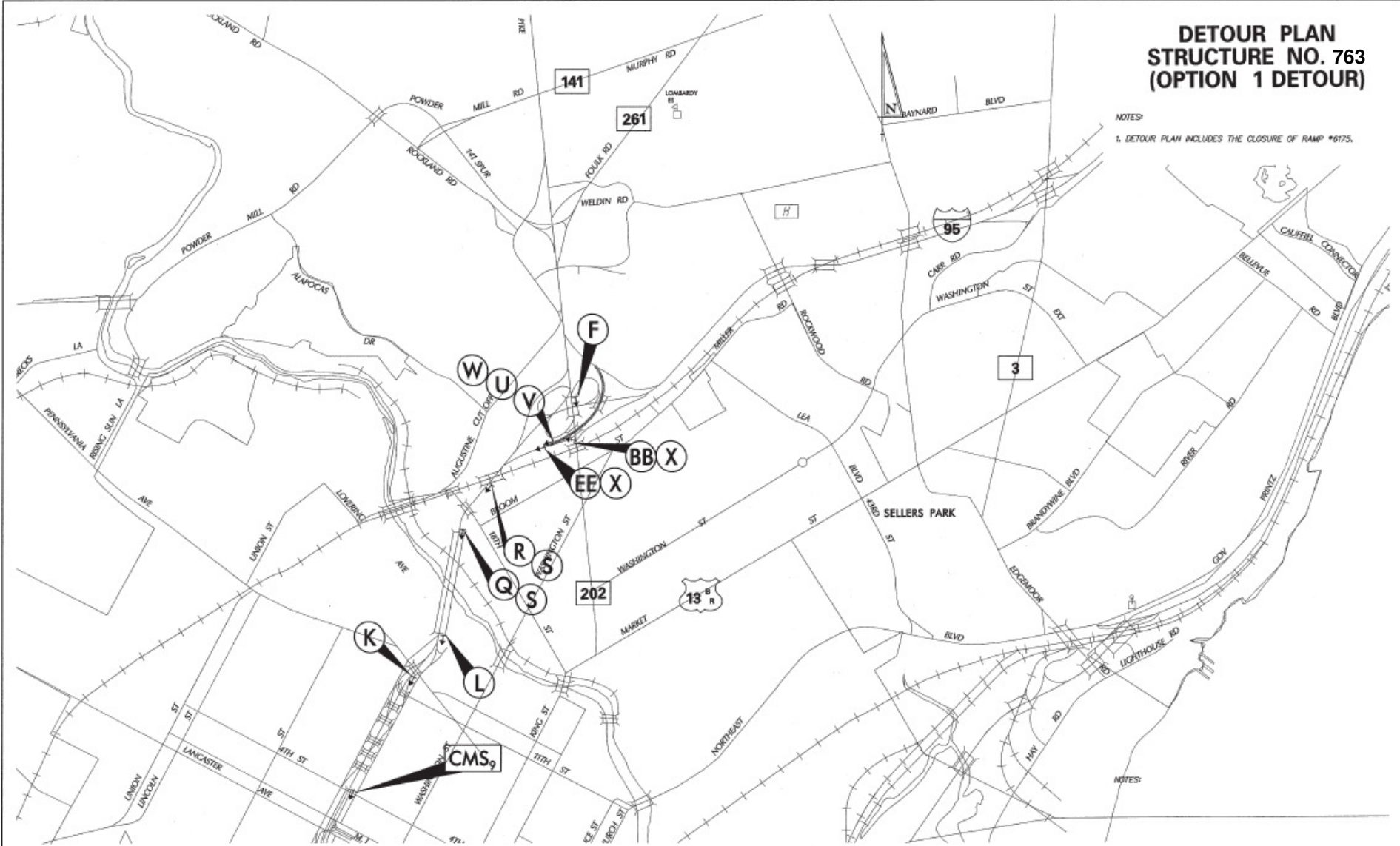


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| DELAWARE DEPARTMENT OF TRANSPORTATION | | NOT TO SCALE I-95 & US 202 INTERCHANGE | | CONSTRUCTION PHASING, MOT & EROSION CONTROL DETOUR PLAN 13 OF 15 |
| SHEET NO. 417 TOTAL SHEETS 483 | | CONTRACT ROAD NO. X DESIGNED BY: QUB / REM CHECKED BY: KMC | | |

DETOUR PLAN STRUCTURE NO. 763 (OPTION 1 DETOUR)

NOTES:

1. DETOUR PLAN INCLUDES THE CLOSURE OF RAMP #6175.



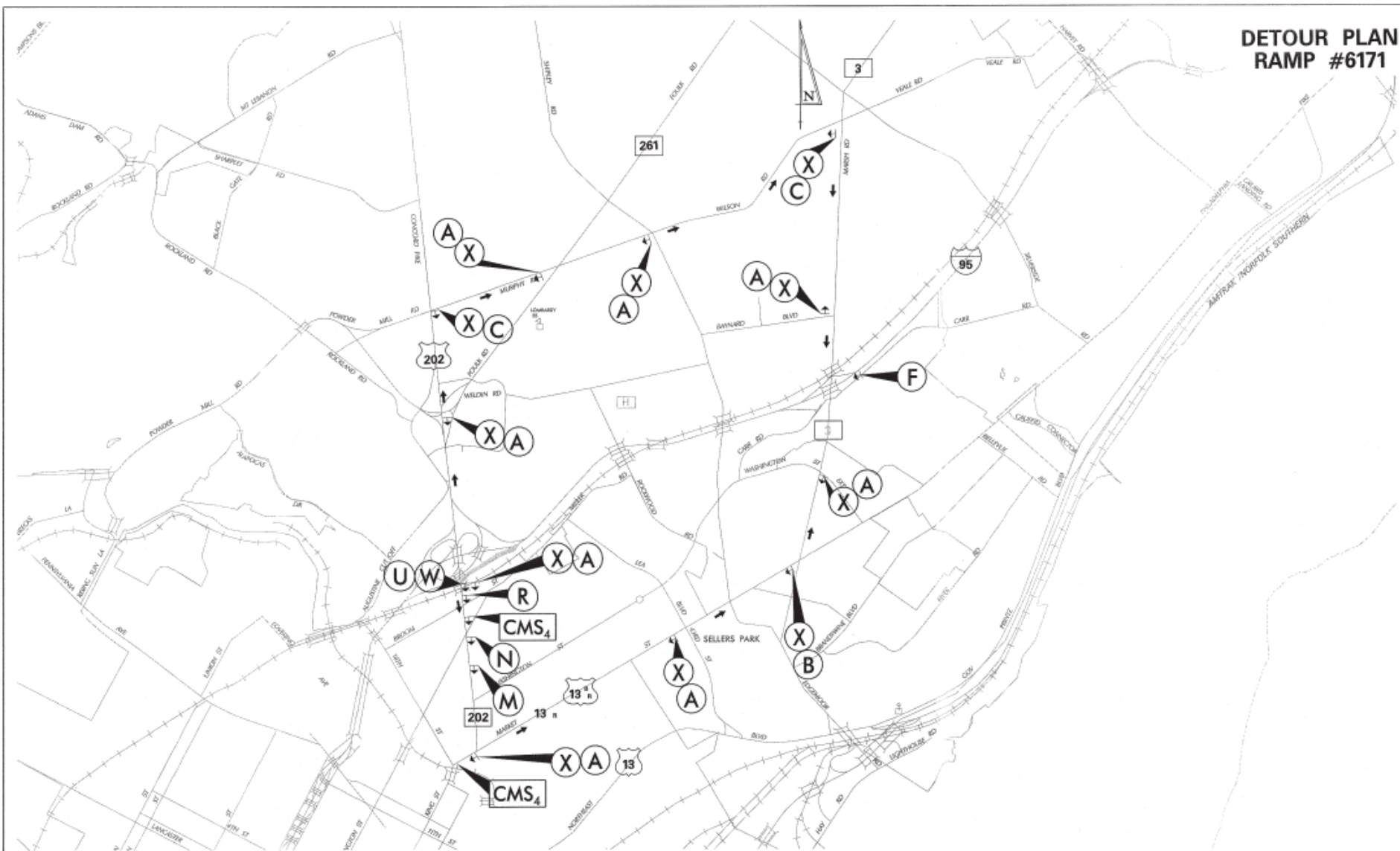
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| DELAWARE DEPARTMENT OF TRANSPORTATION | | | CONSTRUCTION PHASING, MOT & EROSION CONTROL DETOUR PLAN 14 OF 15 | |
| NOT TO SCALE | | | I-95 & US 202 INTERCHANGE | |
| ADDENDUM / REVISIONS | | | CONTRACT NO. 720050002 DESIGNED BY: DJJ / REM CHECKED BY: KMC | |
| SHEET NO. 418 TOTAL SHEETS 452 | | | McCORMICK Engineers & Planners Since 1946 Taylor | |



Ramp 5 Closed and Detoured



DETOUR PLAN RAMP #6171



| | | | | | | | | | | |
|---|--|--|--|---|--|--|--|--|--|--|
| RECOMMENDED _____ DATE: _____ | RECOMMENDED <i>Paul H. Hest</i> DATE: <i>8/16/10</i> | RECOMMENDED <i>Walter H. Hest</i> DATE: <i>3/25/10</i> | APPROVED CHIEF SAFETY OFFICER <i>Walter H. Hest</i> DATE: <i>8/25/10</i> | APPROVED TRAFFIC ENGINEER <i>Walter H. Hest</i> DATE: <i>8/25/10</i> | | | | | | |
| DELAWARE DEPARTMENT OF TRANSPORTATION | | NOT TO SCALE I-95 & US 202 INTERCHANGE | | CONTRACT _____ ROAD NO. X DESIGNED BY: DJD / RHM COUNTY _____ CHECKED BY: KMC NEW CASTLE | | | | | | |
| ADDENDUM / REVISIONS <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table> | | | | | | | | | CONSTRUCTION PHASING, MOT & EROSION CONTROL DETOUR PLAN 3 OF 15 | |
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| SHEET NO. 407 TOTAL SHEETS 482 | | | SHEET NO. 407 TOTAL SHEETS 482 | | | | | | | |

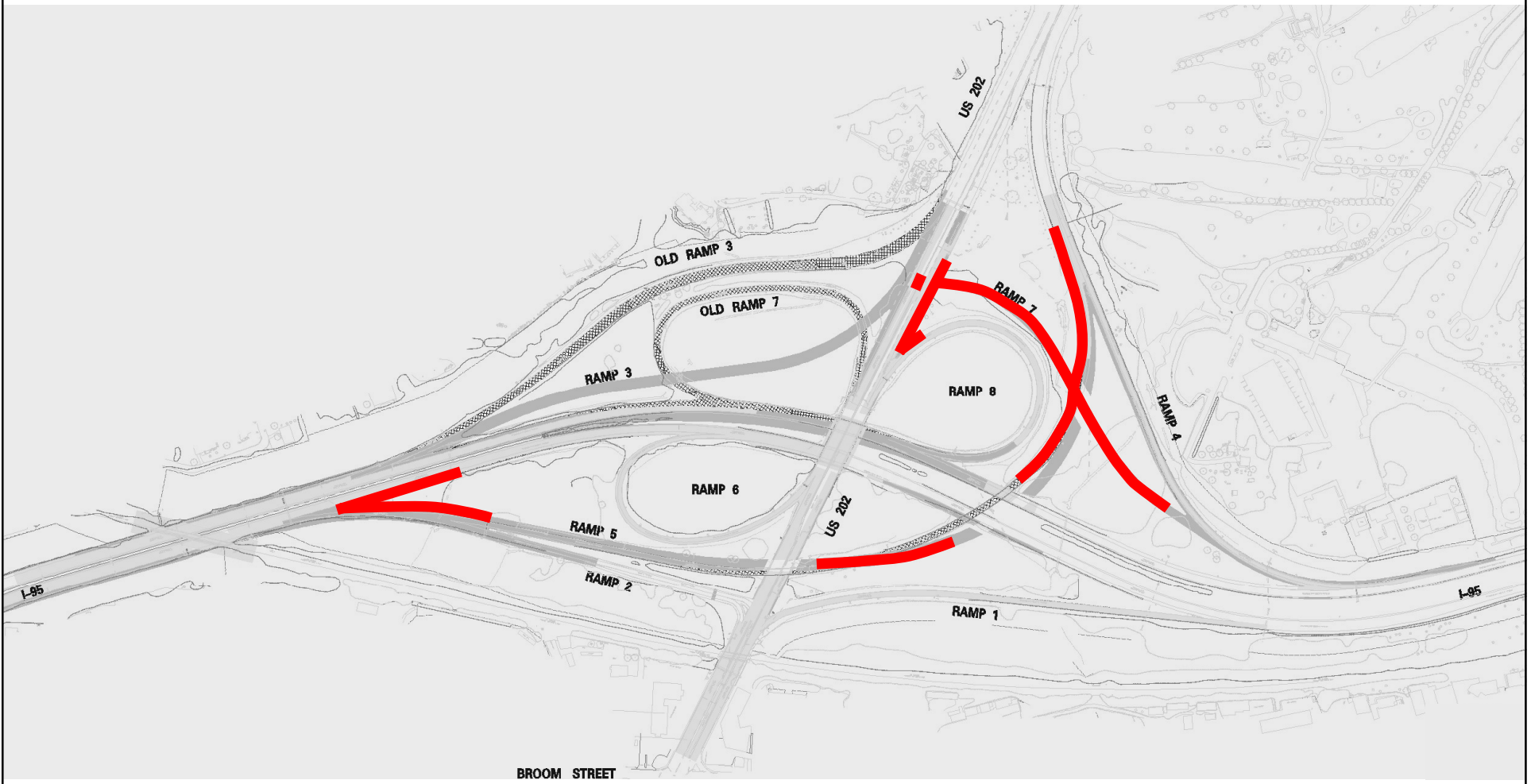
Ramp 1 Detour



Traffic Impacts

- No road or ramp closures or detours

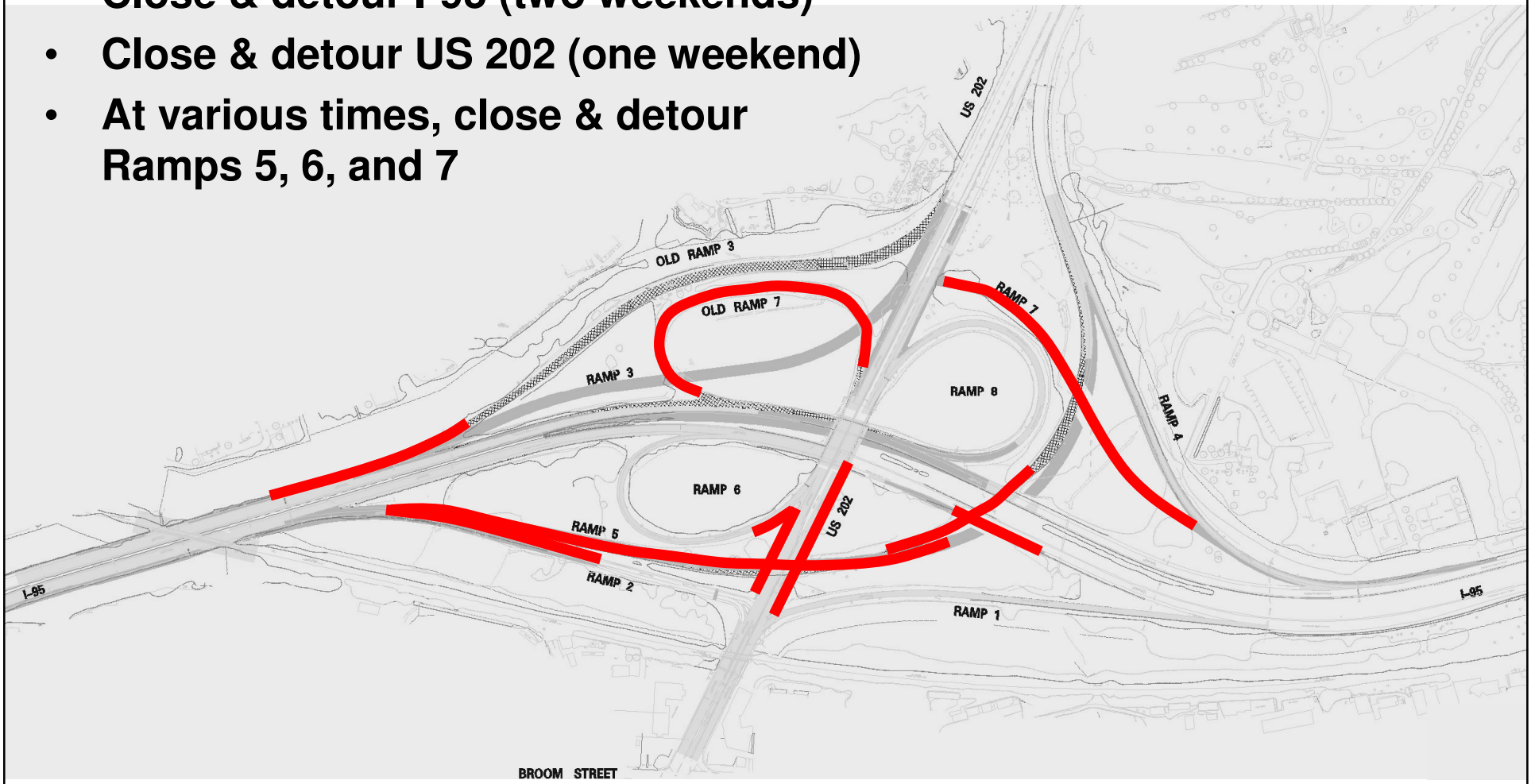
Phase 1, Stage 3 Work Areas



Phase 1, Stage 4 Work Areas

Traffic Impacts

- Close & detour Ramp 4
- Open New Ramp 7 (remove Existing Ramp 7)
- Close & detour I-95 (two weekends)
- Close & detour US 202 (one weekend)
- At various times, close & detour Ramps 5, 6, and 7

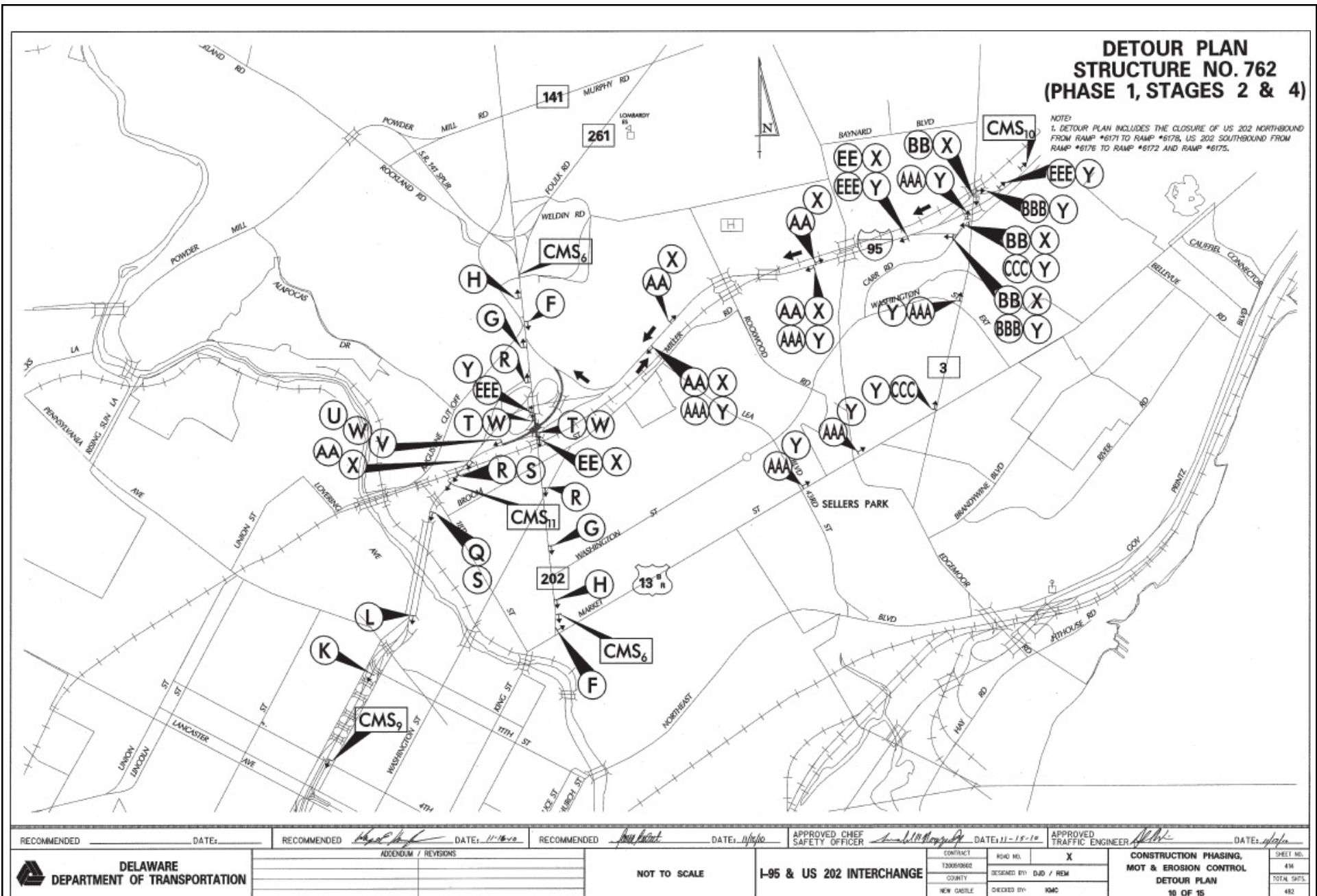


DETOUR PLAN RAMP #6174

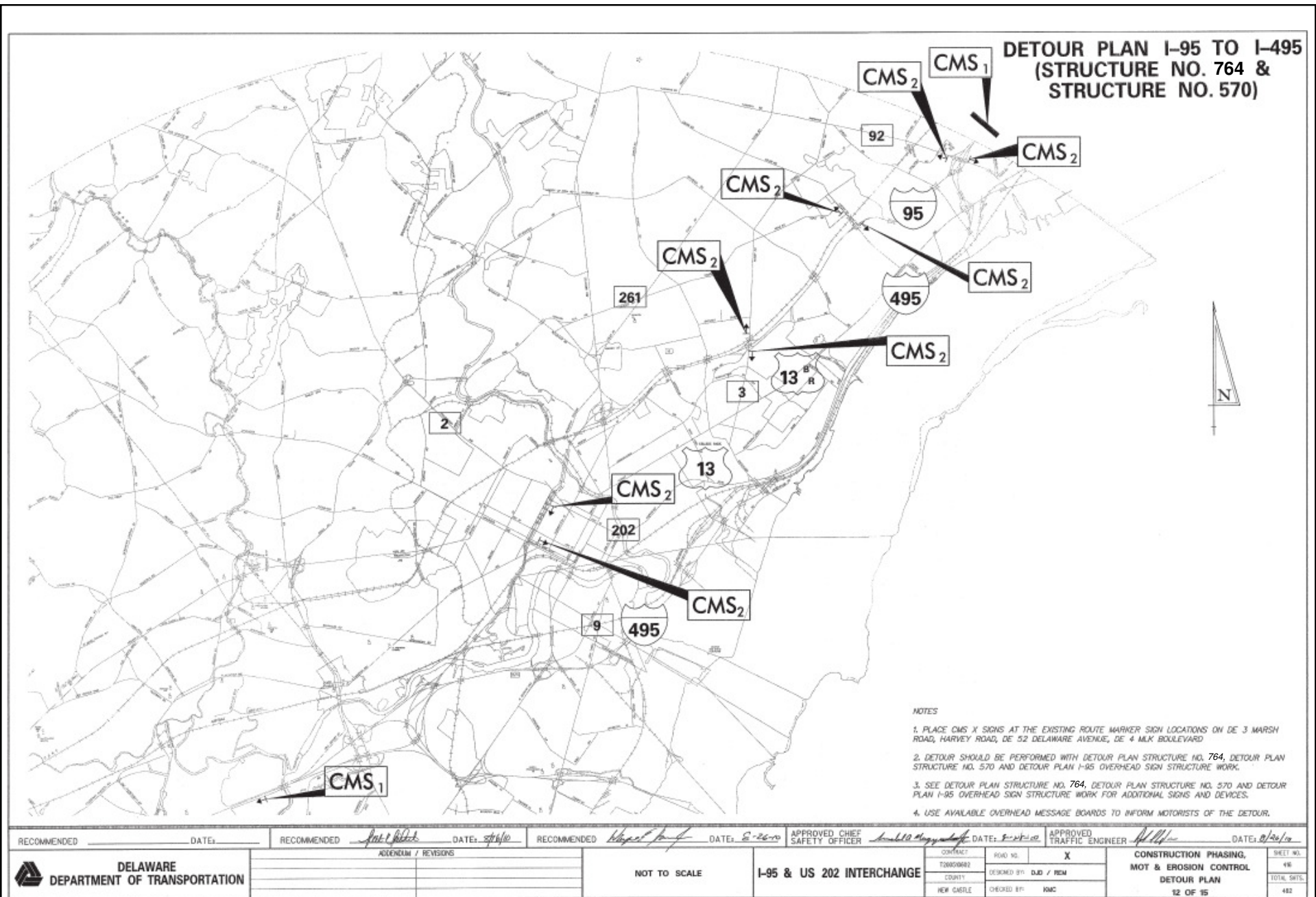


| RECOMMENDED _____ DATE: _____ | RECOMMENDED <i>[Signature]</i> DATE: <i>8/26/10</i> | RECOMMENDED <i>[Signature]</i> DATE: <i>8-26-10</i> | APPROVED CHIEF SAFETY OFFICER <i>[Signature]</i> DATE: <i>8-26-10</i> | APPROVED TRAFFIC ENGINEER <i>[Signature]</i> DATE: <i>8/26/10</i> | | | | | | | | | | | | | | | |
|---|---|---|---|---|-----------|----------|---|-------------|-----|--------|------------------------|---------|--------------|------------|-----------------|--|-----|--|--|
| DELAWARE DEPARTMENT OF TRANSPORTATION | | NOT TO SCALE | | I-95 & US 202 INTERCHANGE | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <th>CONTRACT</th> <th>ROAD NO.</th> <th>CONSTRUCTION PHASING, MOT & EROSION CONTROL</th> <th>SHEET NO.</th> </tr> <tr> <td>20091002</td> <td>X</td> <td>DETOUR PLAN</td> <td>409</td> </tr> <tr> <td>COUNTY</td> <td>DESIGNED BY: DJD / REM</td> <td>5 OF 15</td> <td>TOTAL SHEETS</td> </tr> <tr> <td>NEW CASTLE</td> <td>CHECKED BY: KMC</td> <td></td> <td>402</td> </tr> </table> | | CONTRACT | ROAD NO. | CONSTRUCTION PHASING, MOT & EROSION CONTROL | SHEET NO. | 20091002 | X | DETOUR PLAN | 409 | COUNTY | DESIGNED BY: DJD / REM | 5 OF 15 | TOTAL SHEETS | NEW CASTLE | CHECKED BY: KMC | | 402 | | |
| CONTRACT | ROAD NO. | CONSTRUCTION PHASING, MOT & EROSION CONTROL | SHEET NO. | | | | | | | | | | | | | | | | |
| 20091002 | X | DETOUR PLAN | 409 | | | | | | | | | | | | | | | | |
| COUNTY | DESIGNED BY: DJD / REM | 5 OF 15 | TOTAL SHEETS | | | | | | | | | | | | | | | | |
| NEW CASTLE | CHECKED BY: KMC | | 402 | | | | | | | | | | | | | | | | |

Ramp 4 Detour



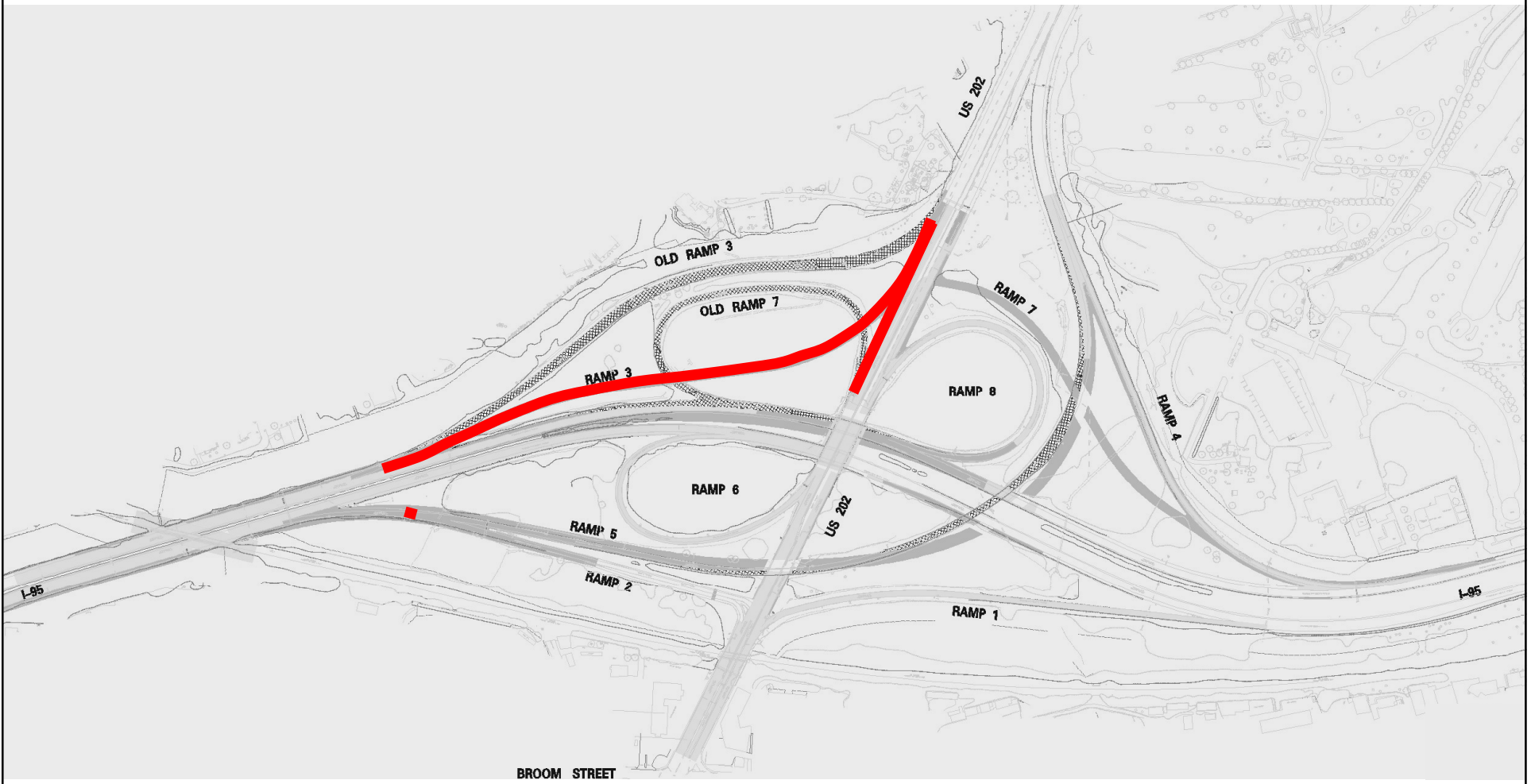
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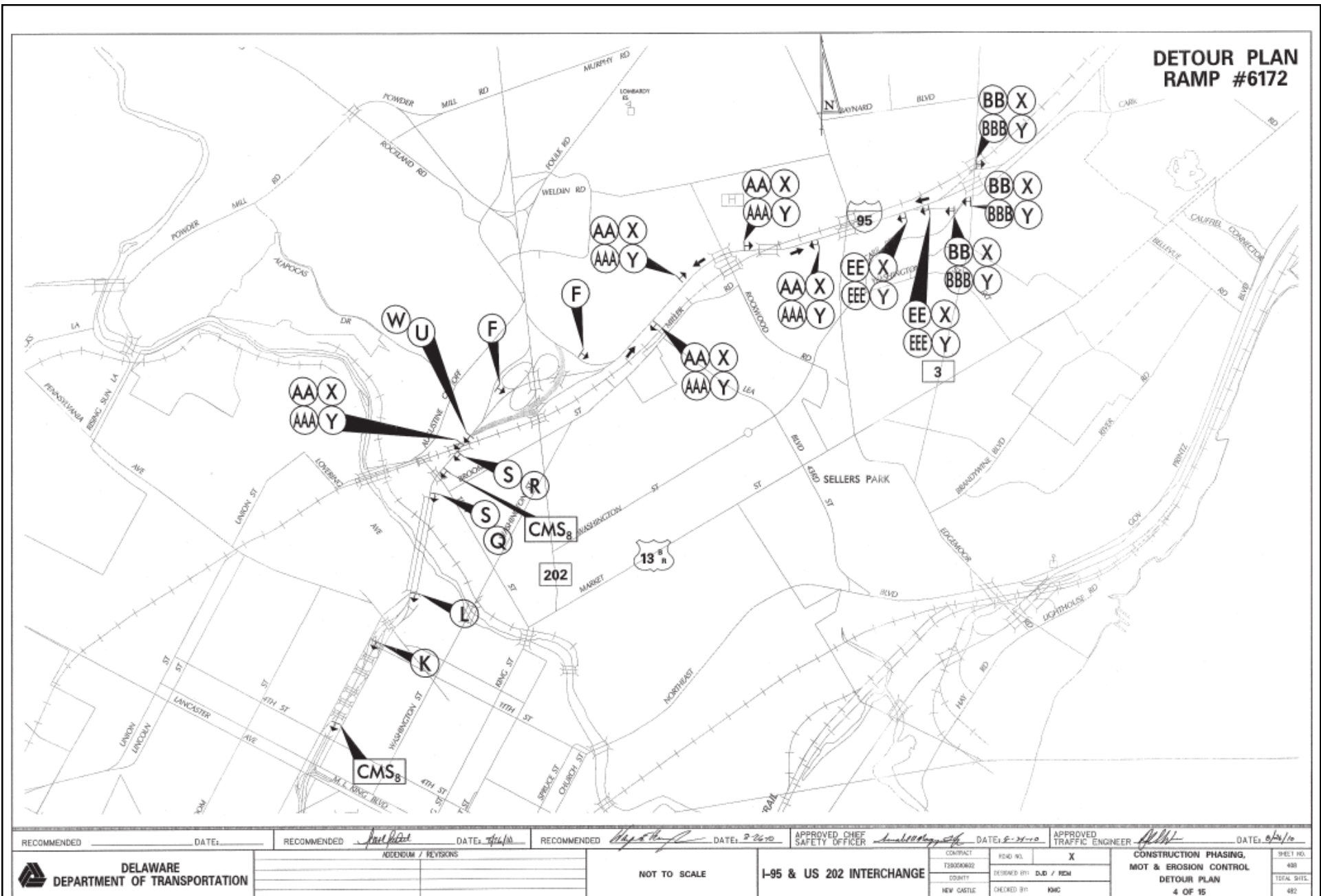


Traffic Impacts

- Close & detour Ramps 2 and 5

Phase 2, Stage 1 Work Areas

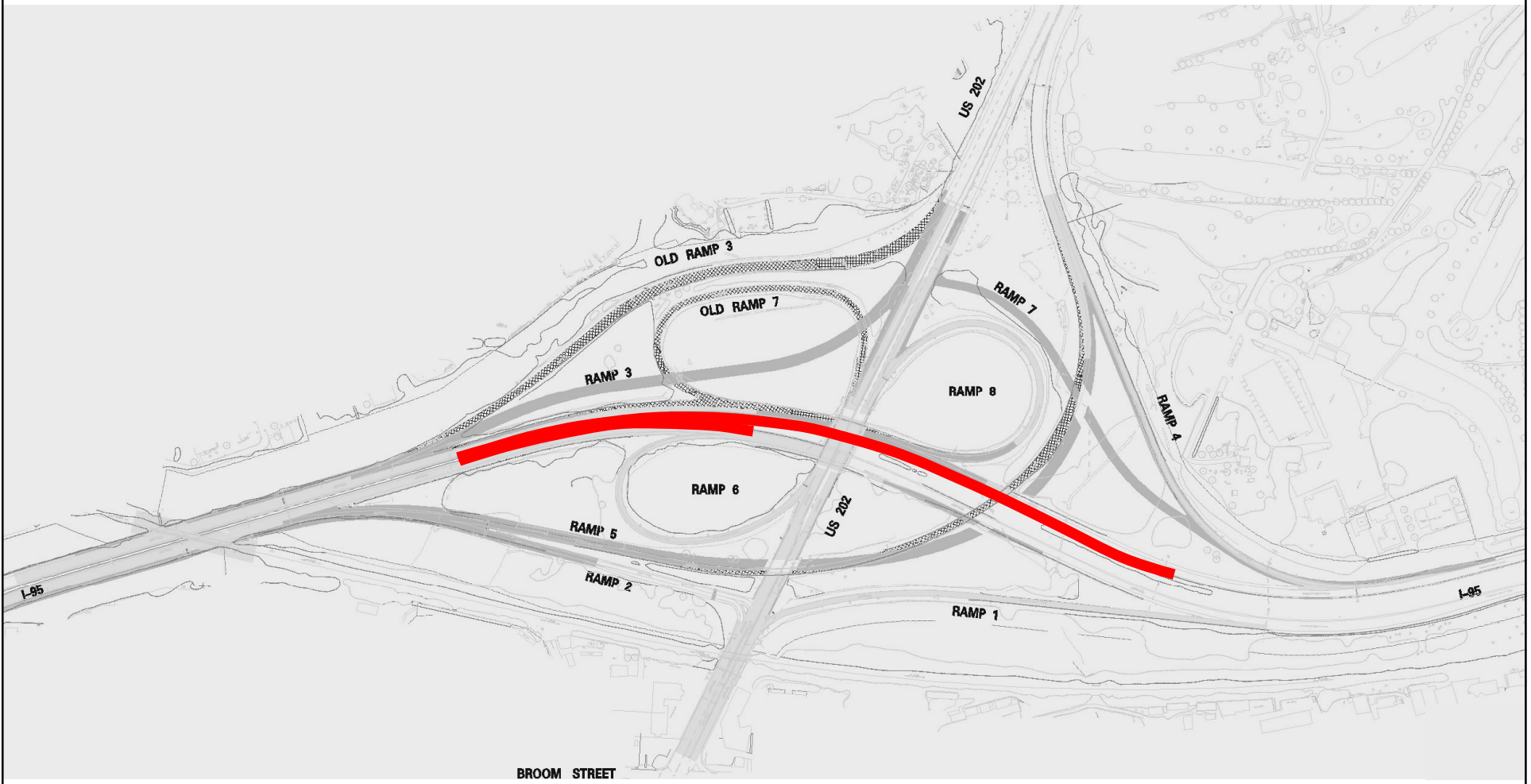




Traffic Impacts

- No road or ramp closures or detours

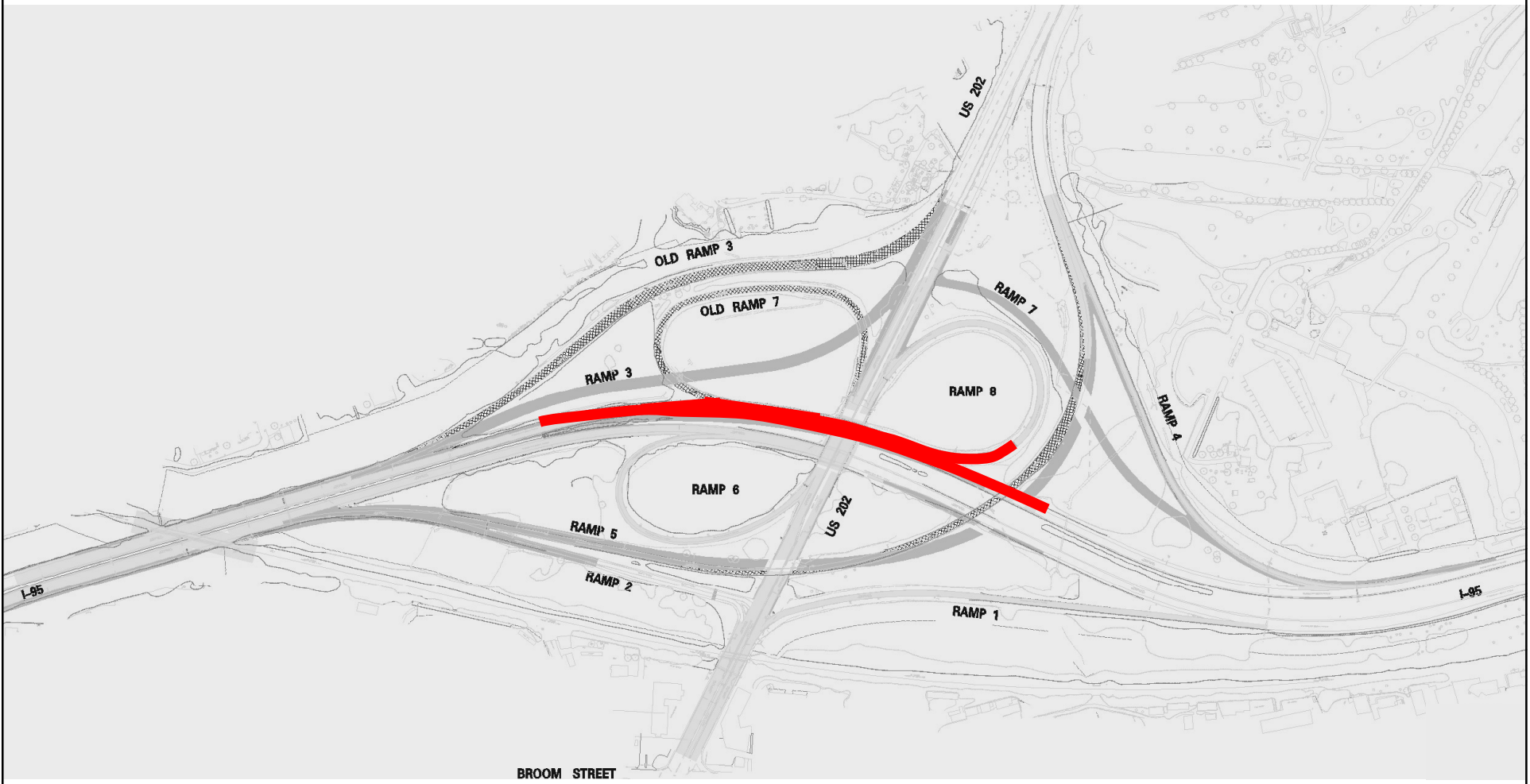
Phase 2, Stage 2 Work Areas



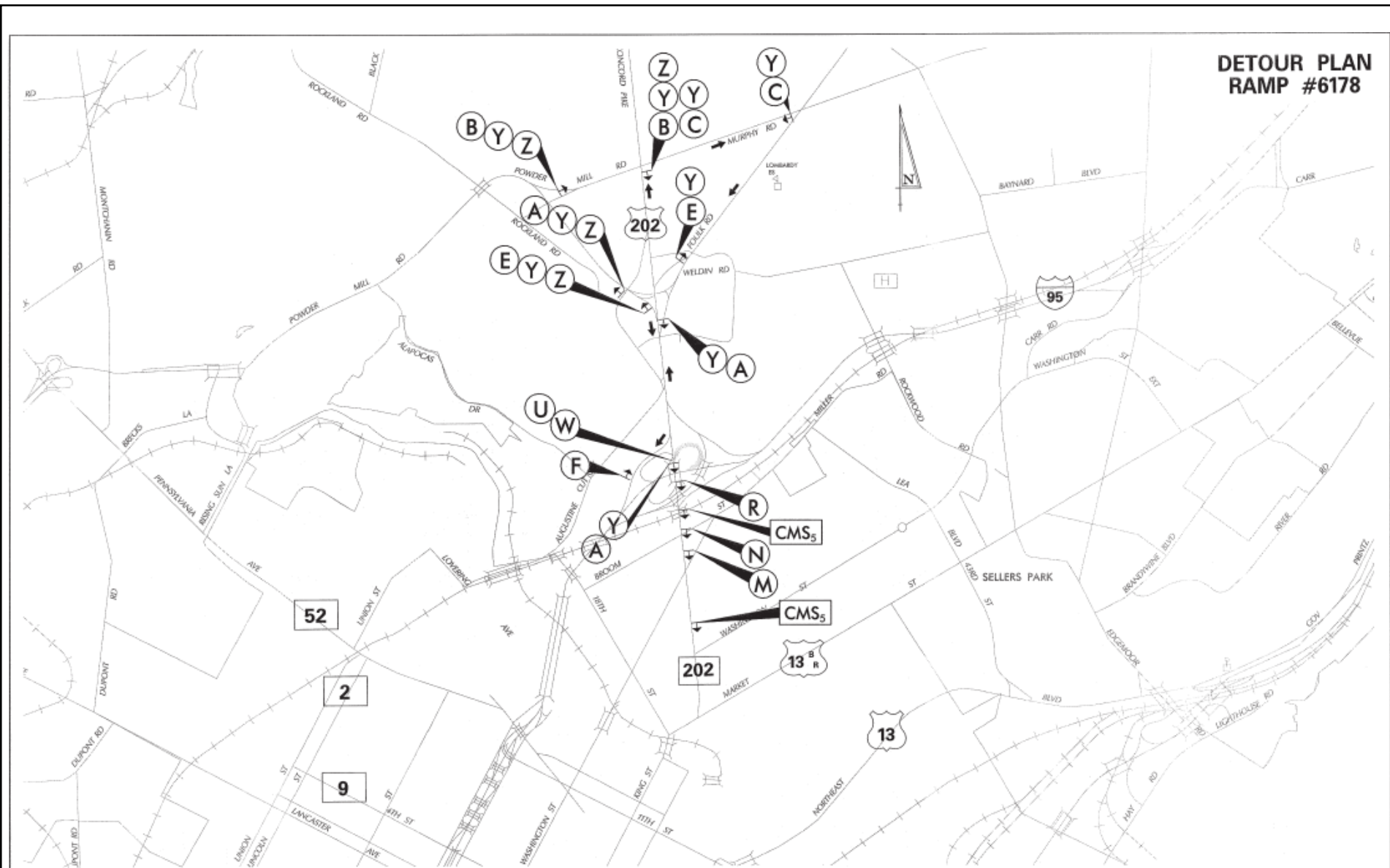
Traffic Impacts

- Close & detour Ramp 8
(continuously for approx. one month)

Phase 2, Stage 3 Work Areas



Stage Duration: 28 days



DETOUR PLAN RAMP #6178

| | | | | | | | | | | |
|---|--|---|---|---|--|--|--|---|--|---|
| RECOMMENDED _____ DATE: _____ | RECOMMENDED <i>[Signature]</i> DATE: <i>8/10</i> | RECOMMENDED <i>[Signature]</i> DATE: <i>8-10-12</i> | APPROVED CHIEF SAFETY OFFICER <i>[Signature]</i> DATE: <i>8-15-12</i> | APPROVED TRAFFIC ENGINEER <i>[Signature]</i> DATE: <i>8/15/12</i> | | | | | | |
| DELAWARE DEPARTMENT OF TRANSPORTATION ADDENDUM / REVISIONS <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table> | | | | | | | | NOT TO SCALE I-95 & US 202 INTERCHANGE | | CONTRACT _____ ROAD NO. X DESIGNER BY: <i>[Signature]</i> DWD / REM CHECKED BY: <i>[Signature]</i> KMC NEW CASTLE |
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| CONSTRUCTION PHASING, MOT & EROSION CONTROL DETOUR PLAN 8 OF 15 | | | SHEET NO. 492 TOTAL SHEETS 482 | | | | | | | |



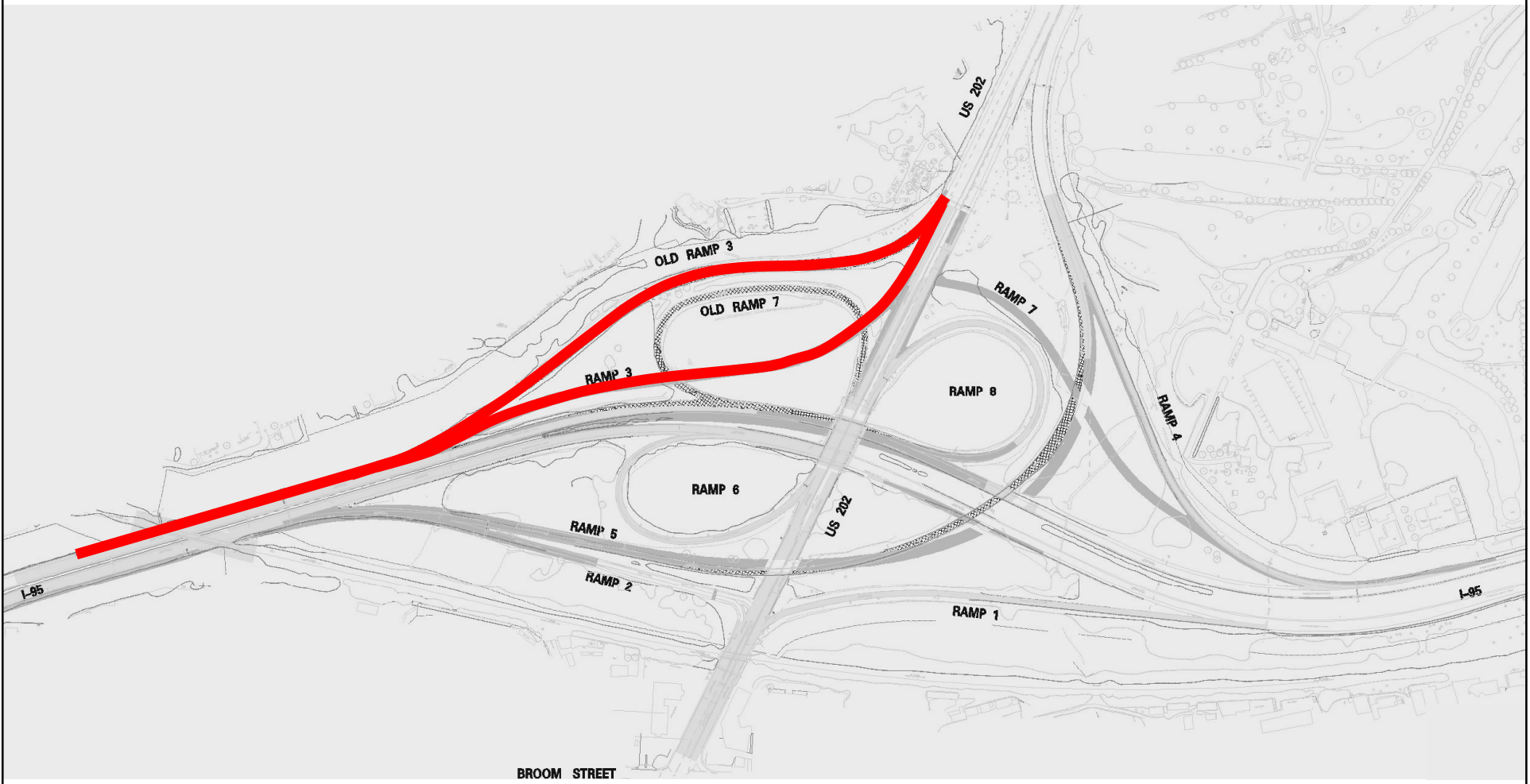
Ramp 8 Detour (only long-term detour in project)



Traffic Impacts

- No road or ramp closures or detours
- Open New Ramp 3 (remove Existing Ramp 3)

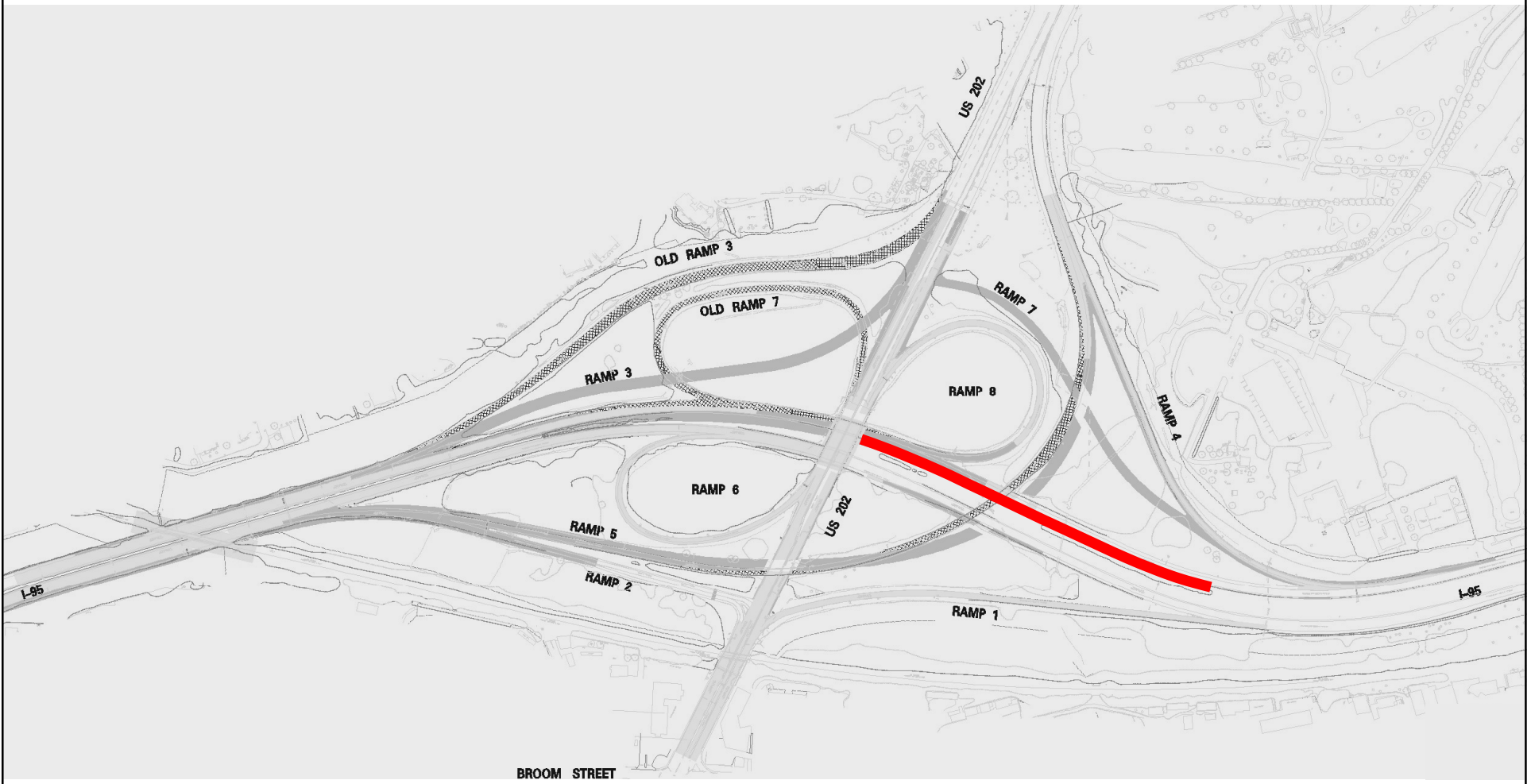
Phase 2, Stage 4 Work Areas



Traffic Impacts

- No road or ramp closures or detours

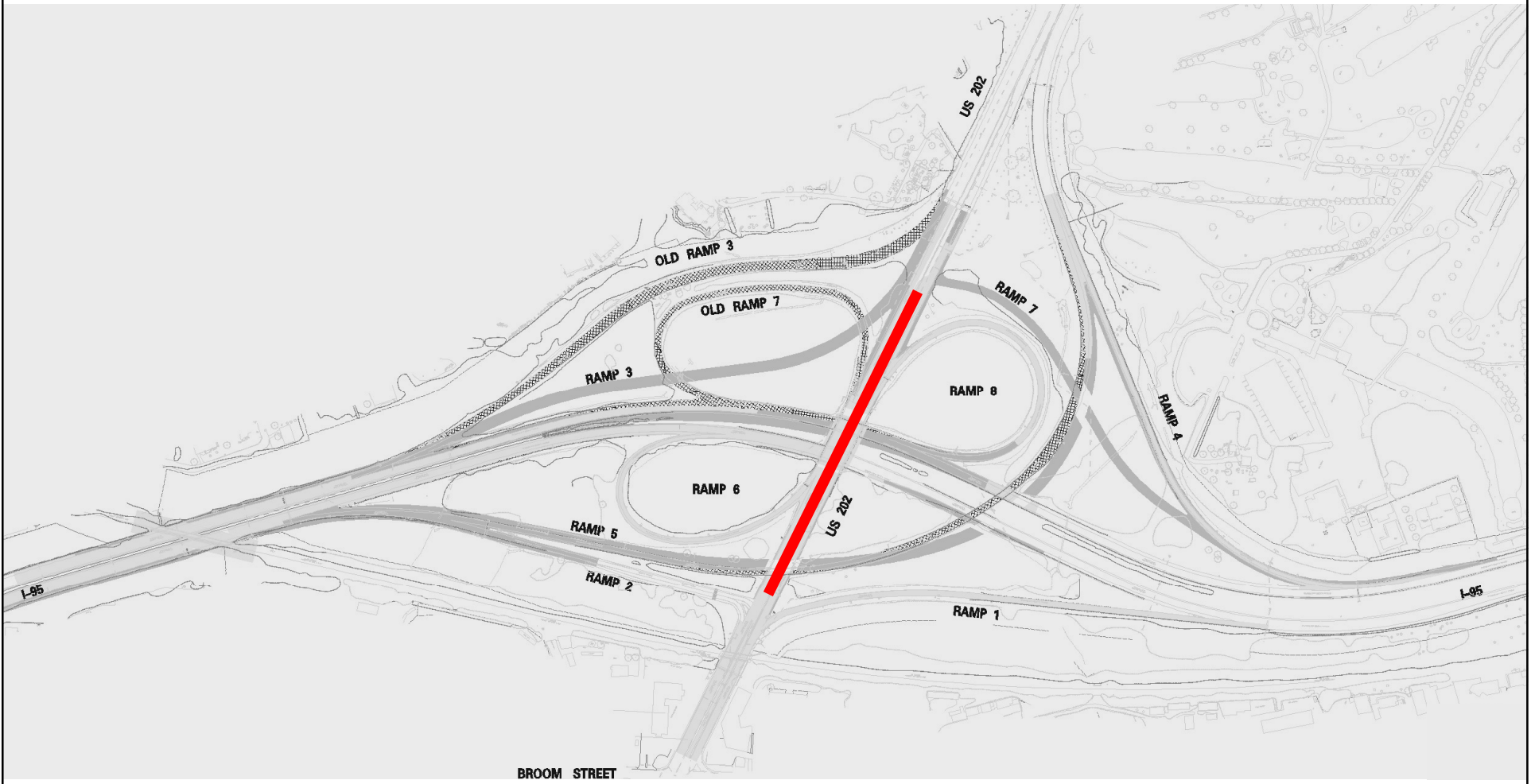
Phase 2, Stage 5 Work Areas



Traffic Impacts

- No road or ramp closures or detours
- Lane and shoulder closures & lane shifts for US 202 median work

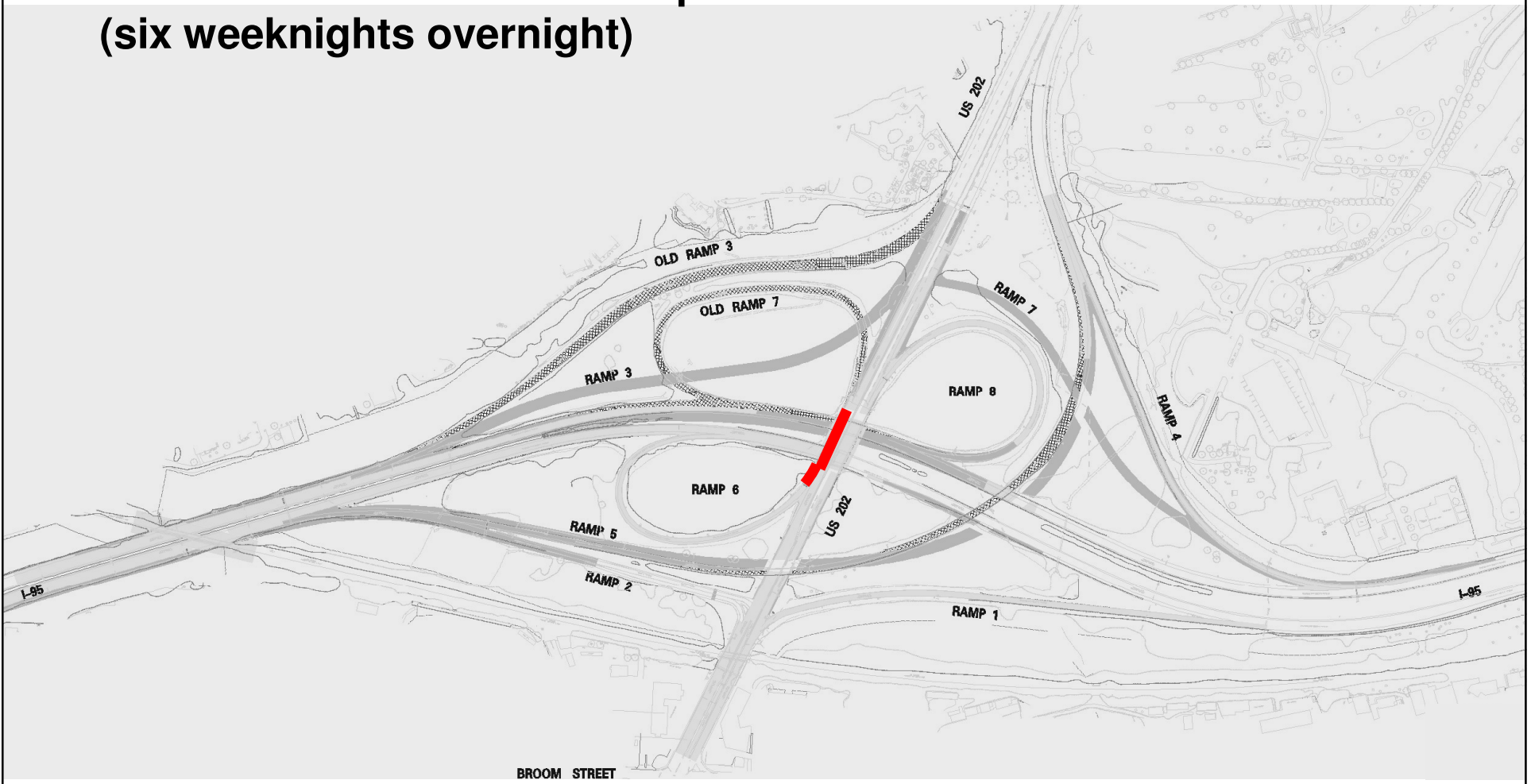
Phase 3, Stage 1 Work Areas



Phase 3, Stage 2 Work Areas

Traffic Impacts

- Lane and shoulder closures & lane shifts (work on SB US 202)
- Close & detour I-95 and Ramps 6 & 8 (six weeknights overnight)



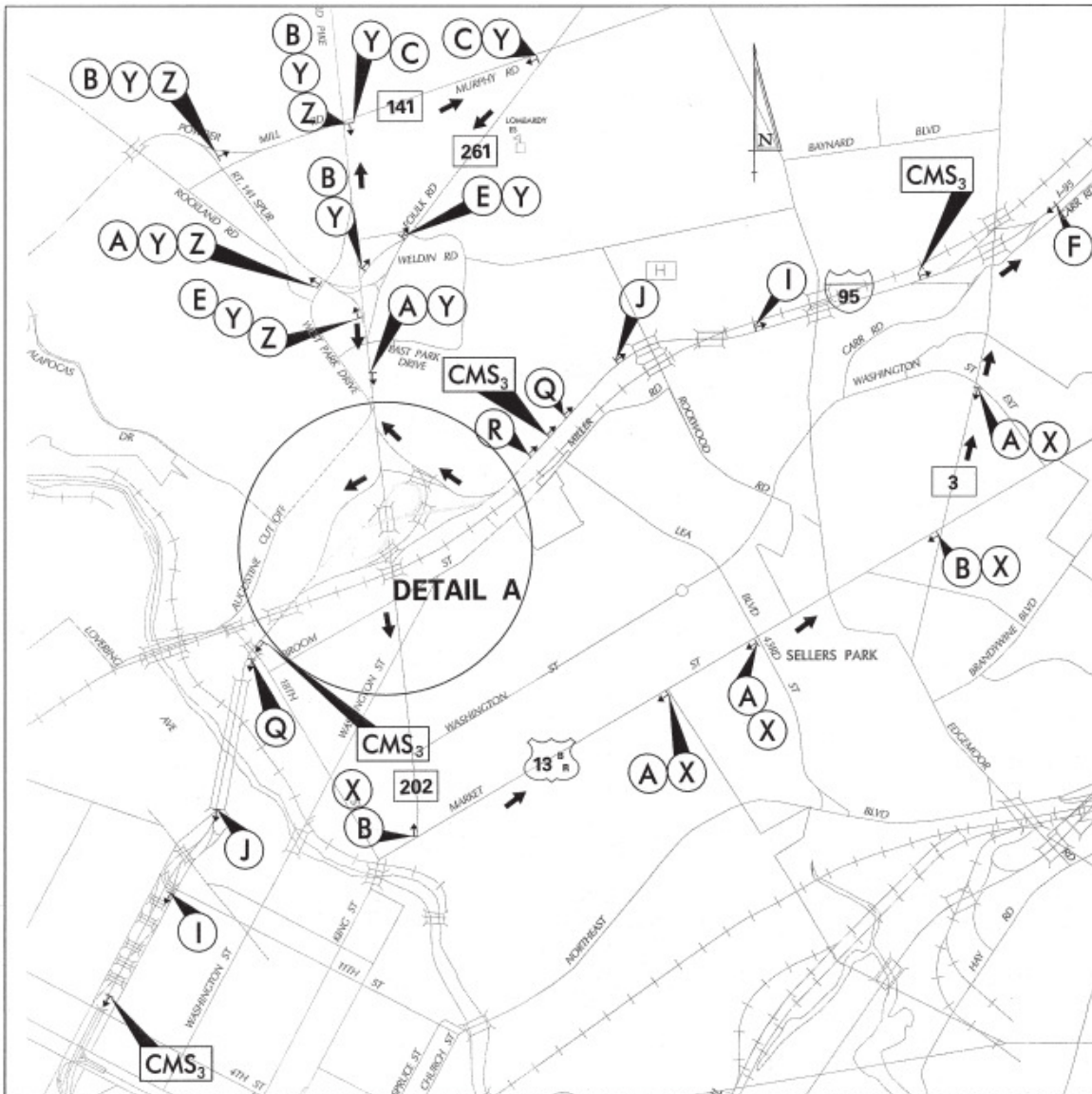
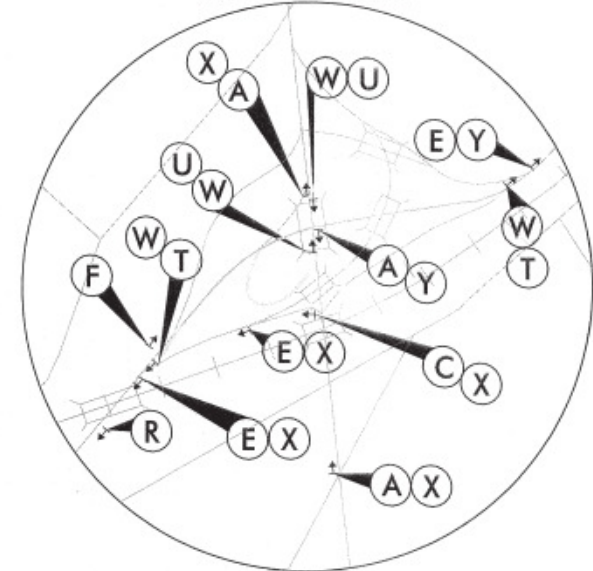
Stage Duration: 64 days

DETOUR PLAN STRUCTURE NO. 570 (PHASE 3, STAGES 2 & 3)

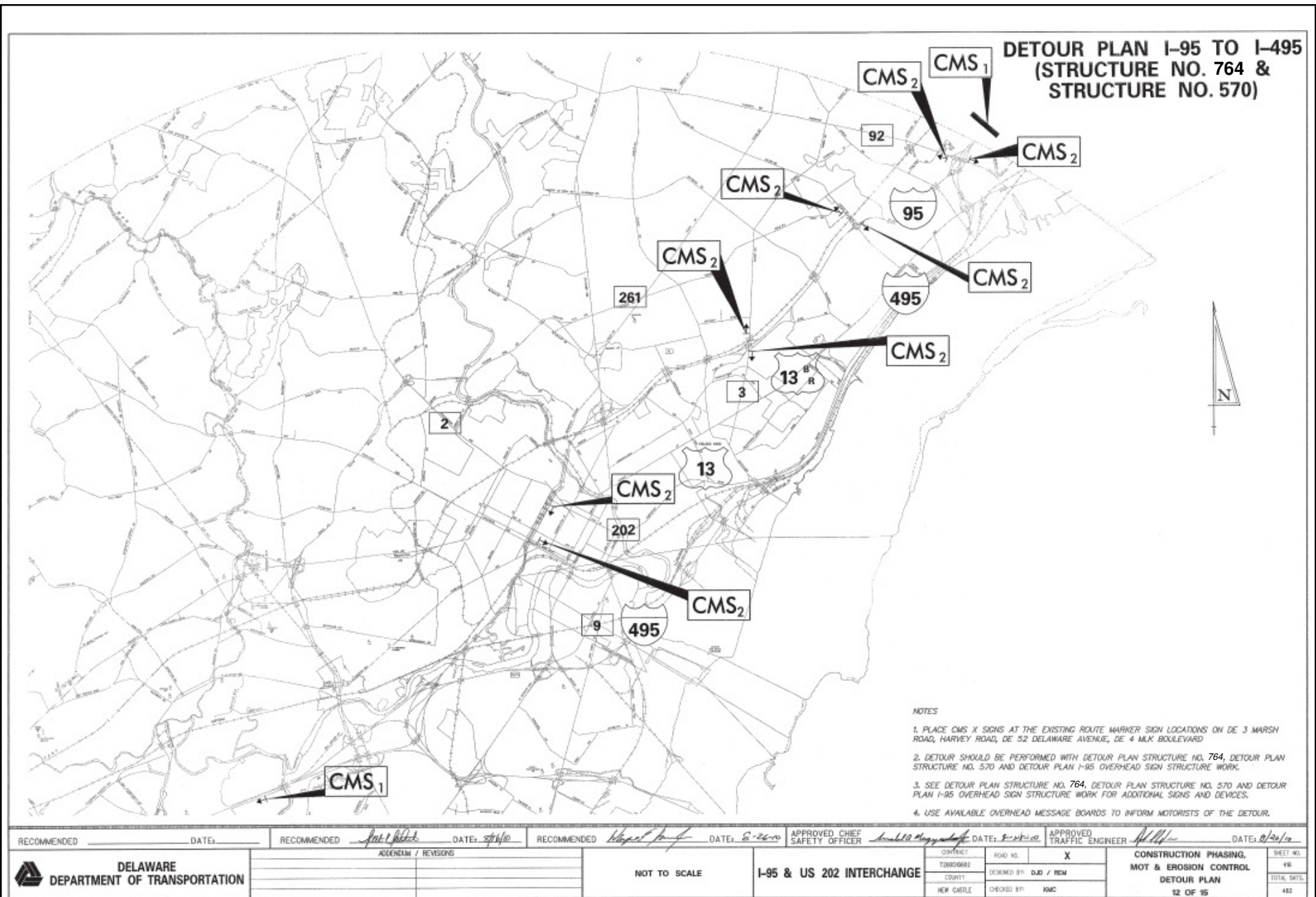
NOTES

1. DETOUR PLAN INCLUDES THE CLOSURE OF I-95 NORTHBOUND FROM RAMP #6172 TO RAMP #6171, I-95 SOUTHBOUND FROM RAMP #6174 TO RAMP #6173, RAMP #6176 AND RAMP #6178.
2. DETOUR SHOULD BE PERFORMED WITH DETOUR PLAN I-95 TO I-495.
3. SEE DETOUR PLAN I-95 TO I-495 FOR ADDITIONAL SIGNS AND DEVICES.

DETAIL A NOT TO SCALE



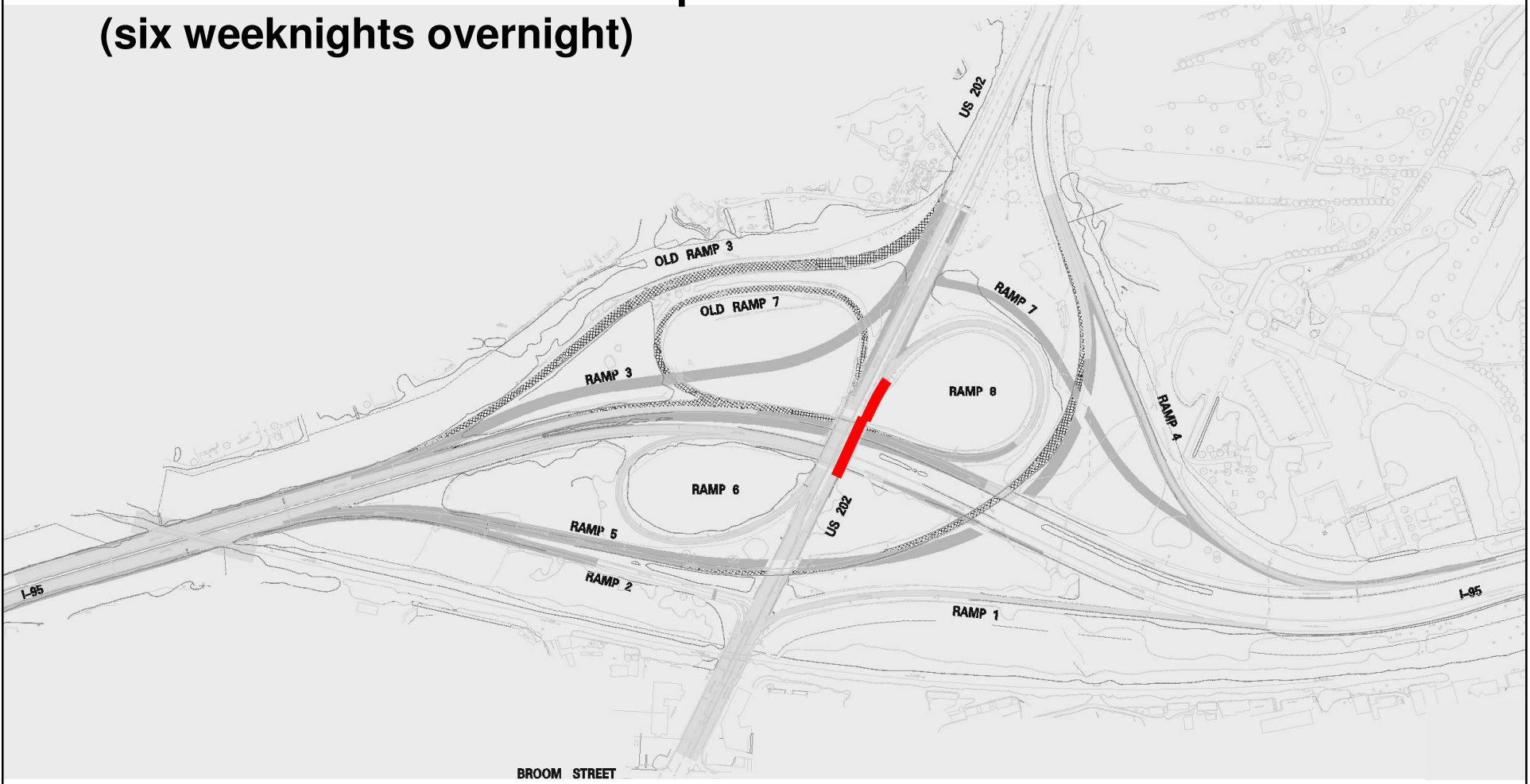
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|--|--|--|--|---|
| RECOMMENDED _____ DATE: _____ | RECOMMENDED <i>Paul P. Ditt</i> DATE: <i>8/10/10</i> | RECOMMENDED <i>Robert J. King</i> DATE: <i>8-26-10</i> | APPROVED CHIEF SAFETY OFFICER <i>Robert J. King</i> DATE: <i>8-26-10</i> | APPROVED TRAFFIC ENGINEER <i>Michael J. Taylor</i> DATE: <i>8/10/10</i> |
| DELAWARE DEPARTMENT OF TRANSPORTATION | | | NOT TO SCALE | |
| US 202 Bridge over I-95 | | | CONSTRUCTION PHASING, MOT & EROSION CONTROL | |
| 15 OF 15 | | | 482 | |



Phase 3, Stage 3 Work Areas

Traffic Impacts

- Lane and shoulder closures & lane shifts (work on NB US 202)
- Close & detour I-95 and Ramps 6 & 8 (six weeknights overnight)

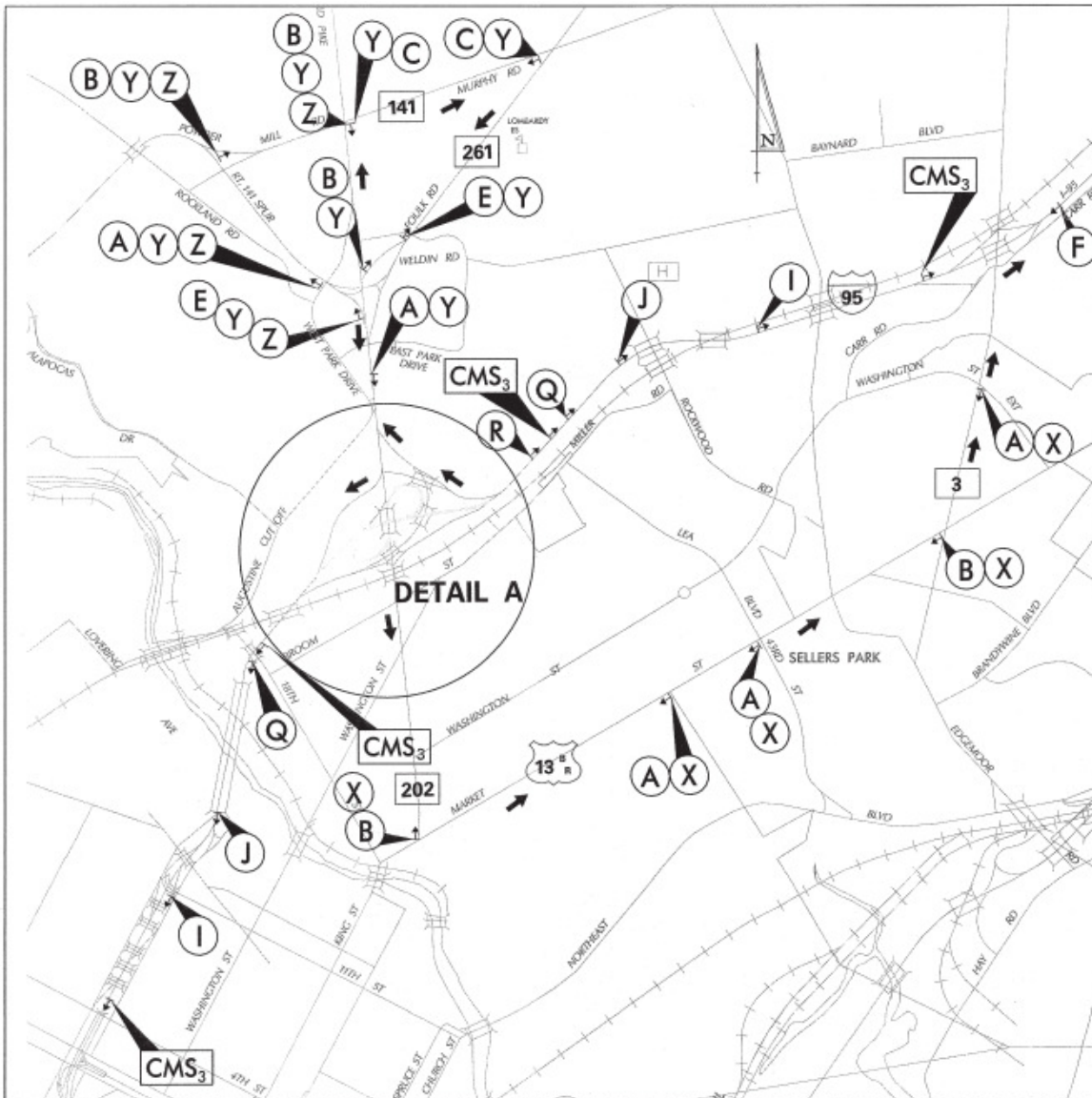
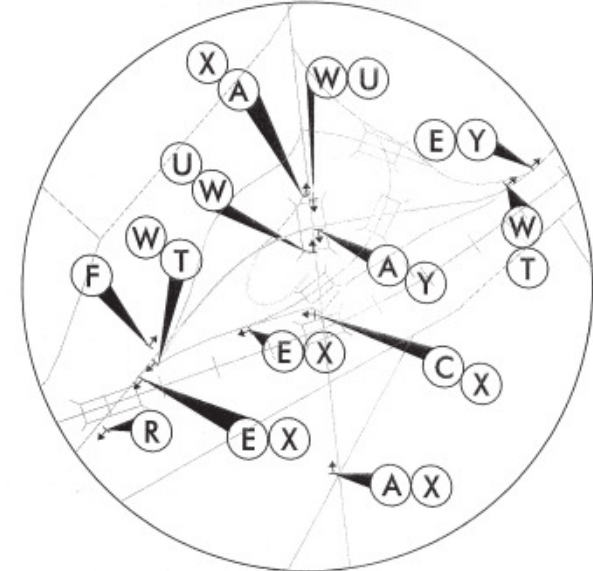


DETOUR PLAN STRUCTURE NO. 570 (PHASE 3, STAGES 2 & 3)

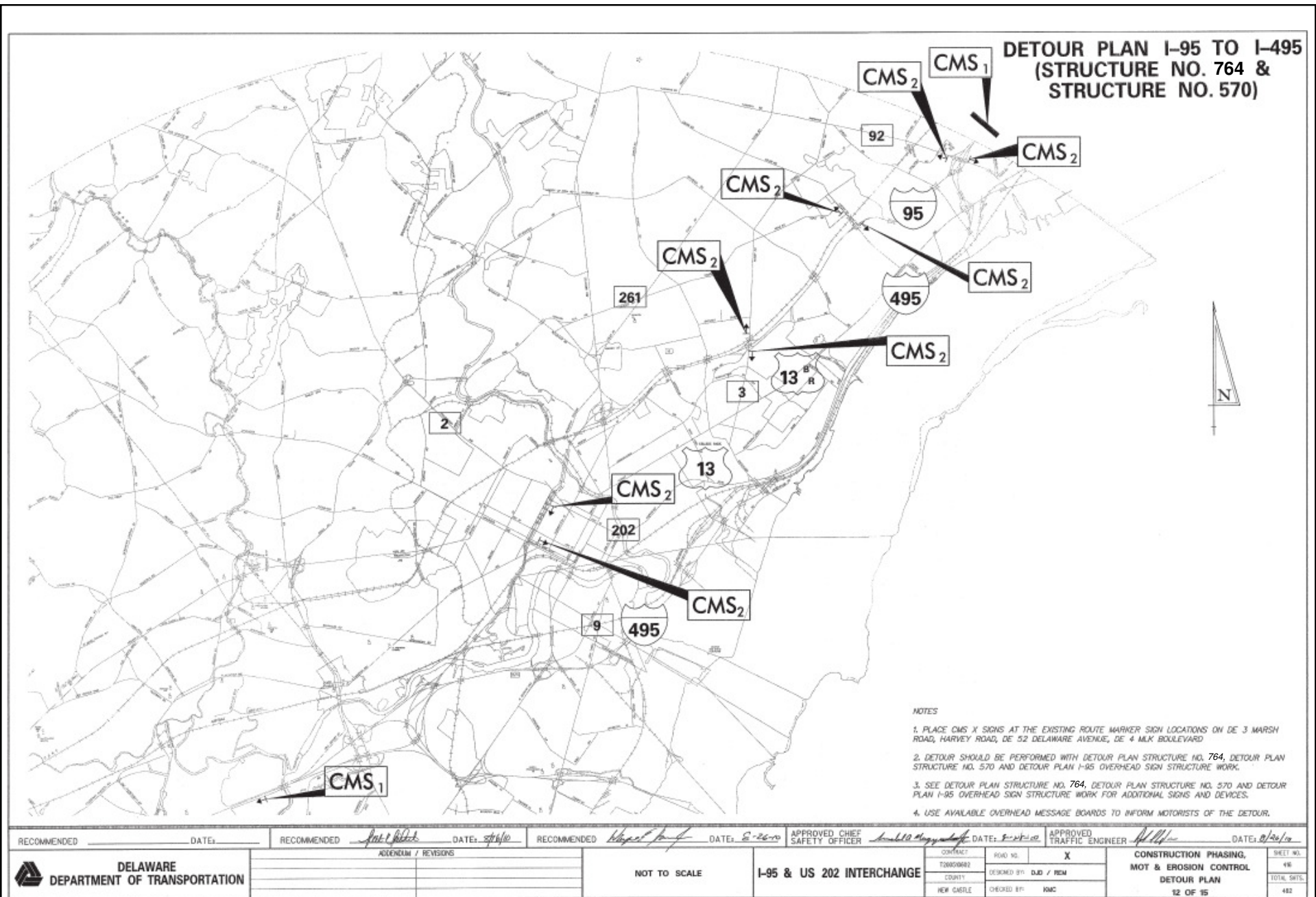
NOTES

1. DETOUR PLAN INCLUDES THE CLOSURE OF I-95 NORTHBOUND FROM RAMP #6172 TO RAMP #6171, I-95 SOUTHBOUND FROM RAMP #6174 TO RAMP #6173, RAMP #6176 AND RAMP #6178.
2. DETOUR SHOULD BE PERFORMED WITH DETOUR PLAN I-95 TO I-495.
3. SEE DETOUR PLAN I-95 TO I-495 FOR ADDITIONAL SIGNS AND DEVICES.

DETAIL A NOT TO SCALE



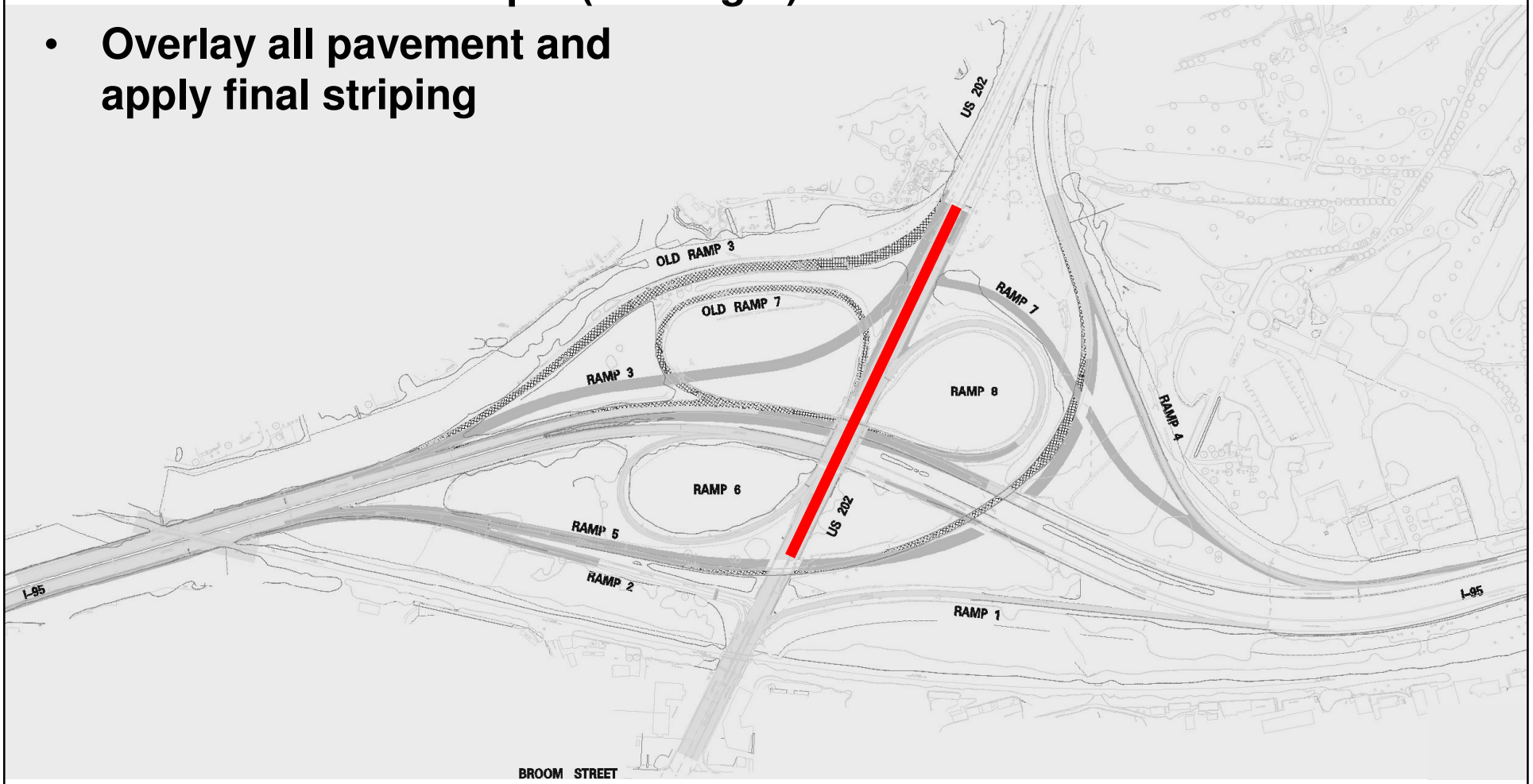
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| RECOMMENDED _____ DATE: _____ | RECOMMENDED <i>Paul P. Ditt</i> DATE: <i>8/10/10</i> | RECOMMENDED <i>Robert J. King</i> DATE: <i>8-26-10</i> | APPROVED CHIEF SAFETY OFFICER <i>Robert J. King</i> DATE: <i>8-26-10</i> | APPROVED TRAFFIC ENGINEER <i>Michael J. Taylor</i> DATE: <i>8/10/10</i> |
| DELAWARE DEPARTMENT OF TRANSPORTATION | | | NOT TO SCALE | |
| US 202 Bridge over I-95 | | | CONSTRUCTION PHASING, MOT & EROSION CONTROL | |
| 15 OF 15 | | | 482 | |



Phase 3, Stage 4 Work Areas

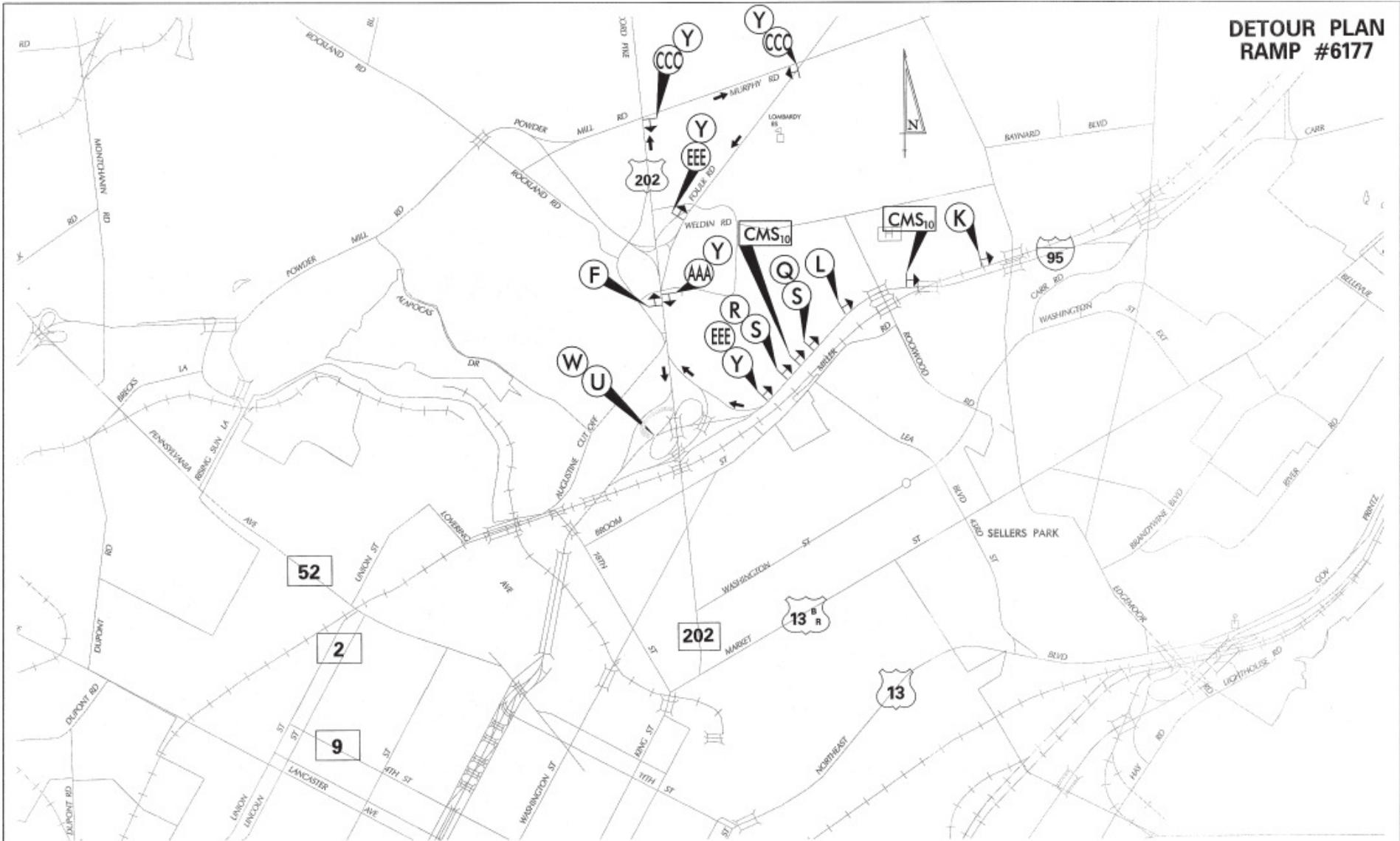
Traffic Impacts

- Lane and shoulder closures & lane shifts for US 202 median work
- Close & detour Ramp 7 (overnight)
- Overlay all pavement and apply final striping



Stage Duration: 20 days

DETOUR PLAN RAMP #6177



| | | | | | | | | | | |
|---|---|--|---|---|--|--|--|---|--|---|
| RECOMMENDED _____ DATE: _____ | RECOMMENDED <i>[Signature]</i> DATE: <i>3/26/10</i> | RECOMMENDED <i>[Signature]</i> DATE: <i>3/26/10</i> | APPROVED CHIEF SAFETY OFFICER <i>[Signature]</i> DATE: <i>3-25-10</i> | APPROVED TRAFFIC ENGINEER <i>[Signature]</i> DATE: <i>3/26/10</i> | | | | | | |
| DELAWARE DEPARTMENT OF TRANSPORTATION | | NOT TO SCALE I-95 & US 202 INTERCHANGE | | CONTRACT _____ ROAD NO. X TOWNSHIP _____ DESIGNED BY: DVD / REM COUNTY _____ CHECKED BY: RMC NEW CASTLE | | | | | | |
| ADDENDUM / REVISIONS <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table> | | | | | | | | CONSTRUCTION PHASING, MOT & EROSION CONTROL DETOUR PLAN 7 OF 15 | | SHEET NO. 411 TOTAL SHEETS 482 |
| | | | | | | | | | | |
| | | | | | | | | | | |
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Relocated Ramp 7 Detour



I-95 & US 202 Interchange Improvements

- **Communication / Coordination**
 - Public Info
 - Operations Plan (strategies)
 - TMP Monitoring
- **Incident Management**
- **Input / concerns / critical considerations**
- **Will come back to TMT to follow-up as construction begins**